



Vol. 15

AUGUST, 1908

No. 8

HARD TIMES: IS THE END IN SIGHT?

Just a bit of optimism—of satisfaction with the present, and of faith in the future. How we can dissipate this period of alleged "hard times"

NOW that both the democrats and republicans have chosen sane, sound and safe "standard-bearers" each guaranteed to be the only political Moses, for whom the American people have been crying with the same persistence that the American baby cries for "castoria;" now, also, that the prohibition party has a good "steady" driver for its water-wagon, and the independence league, having "repudiated the devil and all his works in the shape of Mr. Bryan," is prepared for the enthusiastic endorsement of Mr. Hearst, or whoever he may select for the presidential chair, we have time to settle back in our easy chair, draw a breath of relief and "take stock."

In spite of the grumbling pessimists, there really do seem to be signs of the passing of the period of financial stringency. The prices of farm products continue good. Cotton and corn, the great agricultural staples, seem to be bumper crops. The government report promises more cotton by a million and a half bales than last year, while the July estimate on corn shows a probable increase of 120,000,000 bushels over 1907. The wheat outlook is good, though there is probability of a slight shrinkage in quantity; but the amount of old wheat in the hands of the

farmers is much below normal, and the price is unusually high.

With regard to the railroads we hear that the Chicago, Milwaukee & St. Paul is in the market for 2,000 box-cars, that the International and Great Northern has just placed an order for 500 box-cars and ten large freight locomotives and the Iowa Central is seeking bids for 225 cars. The Chicago bank clearings early in July showed an increase for the first time since the panic, and money is reported "easy" in New York. Stocks are going up. United States Steel common has nearly touched 45, highest since the November "panic"—higher by 10 points than in July, 1907. From all over the country we hear reports of railroads and industrial concerns putting their old help back on full time, 1000 here, 5000 there, restoring wages and generally increasing their output. There is every sign of a revival of business and the outlook for the future, in spite of the presidential election, is exceedingly bright.

Among pharmaceutical manufacturers we hear of shrinkages in volume of business, of shutting down of plants and laying off of hands; but we know of this only by hearsay. As to medical journals—CLINICAL MEDICINE certainly has no reason to complain; our business has been remarkably good—

mighty good when one considers the widespread money stringency and the "lemons" that are being handed us by those who object to our work for the uplift of the profession—for the doctor himself.

Perhaps our view of the situation is too optimistic, colored by the fact that the American doctor is coming over in shoals to the principles of alkaloidal therapy and "the square deal," and that the so-called hard times are really a "boost" in its favor. At any rate we are not finding fault and are not a bit down-hearted. We look forward to the future with just the same eagerness and optimism that we have always felt. We know we shall win!

The best way to bring about good times is to quit thinking about hard times. There really is no such thing. Times are *not* hard. It is merely a state of mind, a really "cramped" mental condition with which we have to deal. There is money enough in the country. The farmer is getting good prices for his products; wages have not been seriously cut. All that is needed to set the wheels of commerce and industry to spinning as busily as ever is for you and I and all the rest to "loosen up." Dig up the old sock that you have buried under the current bushes! Let the rent of that safety deposit box of yours lapse and put your money in the savings bank. Get prices on that automobile which you have been wanting for the last two years, take a post-graduate course, buy some new medical books and stock up on the remedies you are going to need for the fall "campaign."

Take a vacation, and let the good wife go along. The trip will be cheap in the long run, for it will stir your blood, stimulate your neurons, dissipate your melancholy and set you to thinking of how good the Lord has been to you all these years.

Hard times? There aren't any hard times! Business is getting better every day, and all you need to do is to realize that fact and go out and get your share. We are out after ours, squarely and honestly, and that reminds us that if you have not paid up your subscription renewal, or

if you know someone who ought to subscribe to CLINICAL MEDICINE—well, you know!

Yes! We've answered. Actually had the temerity to "talk back." Friends say its "good." Other fellows not heard from. Want a copy? Say so!

"DON'T GIVE UP THE PATIENT"

Under this head *The Critic and Guide* quotes a striking example of what the physician may do for his patient and what the patient may do for himself when both are filled with a strong healthful optimism. As Dr. Robinson rightly remarks, this is the physician's greatest asset, and in illustration of this fact he tells the following little story, related by Prof. W. S. Thayer, of Baltimore, at the recent meeting of the A. M. A. in this city:

A few years ago he had under his care a patient who had had one tuberculous kidney removed some years before. She had then bilateral pulmonary tuberculosis, tuberculous pleurisy, tuberculous peritonitis and tuberculosis of the remaining kidney. The temperature for weeks had been constantly elevated, the pulse rapid and feeble. She seemed *in extremis*. Had the doctor been asked he would have said that she had probably a few weeks to live. She asked calmly if she were going to die or whether there was any chance of recovery. He answered her truly that she was very ill, that the outlook was not good, but there was always a chance for the arrest of the disease, and that it would be wrong even to think of giving up the fight. For two years that patient has been free from fever, to all outward appearances well, and today she is actually working for her living.

This story bears out the opinion which we have long held, and which we have frequently expressed in these pages, that the physician should always fortify his patient, with all his power, with that most powerful of remedial agents—hope. Gloomy prognoses should be avoided even when a fatal issue seems inevitable. Even "moribund" patients fool us once in a while, getting well when we least expect it. A patient with heart disease may live out his allotted term of years; cancer once in a while is cured by nature, assisted or not by our remedies; and a patient with Bright's disease not infrequently is restored to a condition of apparently perfect health. And so it is with many other supposed-to-be "inevitably fatal" diseases.

No man should be a doctor who is not an optimist. He should have faith in himself and in possibilities of cure which transcend the limits fixed by textbook authorities; he should be inspired by resistless enthusiasm and irrepressible endeavor. That's the real "alkaloidist." When you, Doctor, get hold of one of the desperate cases make up your mind to work, and work as other men never worked. Fight for your patient's life, and make him understand that you are fighting for him and that he must fight with you. We know that miracles may be done, or what to unthinking men seem miracles, by a man who puts *all* the heart and brain that he has at the service of those whose lives he is trying to save.

Don't give up the patient, and you will be surprised how many patients there will be who will put to shame all the gloomy prognostications of Dr. Gloom.

The only man who never makes any mistakes is the one who is holding down a political job—and has it cinched.

"CONSTRUCTION—NOT DESTRUCTION"

This is the title of a little booklet which has been issued by *American Medicine*, describing the plan of its new "Department of Pharmaceutical Remedies," in which it is proposed to give an honest, impartial description of the leading proprietary preparations. We are informed that these descriptions will be unprejudiced, that they will be based upon careful investigation, and that they will be full and free and fair, the purpose being to give to the medical profession useful, practical and absolutely reliable information concerning these products.

This is a move in the right direction. We know, because we know Editor Lewis, that this department will be handled in a broad and liberal spirit, that hair-splitting and unpractical technicalities will not enter largely into its work, and that there will be a spirit of "squareness" which will be appreciated both by the doctor and the pharmaceutical manufacturer. While there have been extravagances and possibly occasional falsehoods embodied in the presentations of the prepa-

rations of some drug houses, in the majority of cases these have not been intentionally misleading, but rather a reflection of the glowing optimism of the times, the advertising "spirit of the age" and the natural faith of the manufacturer in the remedies whose sale he is trying to promote. It is our honest belief (possibly an erroneous one) that most of the faults complained of can easily be removed if critic and criticised can meet on common ground and talk these things over in a mutually helpful and "decent spirit." If we understand it, *American Medicine* offers to furnish the "ground."

To label every man who has something to sell a "liar," to brand him as iniquitous, as seeking to mislead and to "exploit" the medical profession purely for private gain, is just as unfair as it would be to point the finger of scorn at your professional neighbor, whose treatment of any case is not the same as your own, possibly because he is more optimistic concerning the things possible of accomplishment than you are.

We need to be tinctured with more charity in discussing the faults of our neighbors. The only "ethics" worth while is based upon mutual consideration, one for another. We all live in glass houses. What we want is an honest effort to reach our own ideals of truth, the courage to live up to them, and a real living, vital spirit of sympathy and of helpfulness. By all means let us have more "construction." We are trying to do our share—in our way—and *American Medicine* is preparing a big "boost" along somewhat different lines. Can we not all help?

THE DRUGGIST AND HIS NOSE

We might say a great deal on this subject—we have just been reading the last issues of the *Bulletin of the American Pharmaceutical Association* and of *N. A. R. D. Notes*—but we will refrain and relate two instances as illustrating a dangerous propensity of our brother, the druggist, and the likelihood of automastication so far as his own personal proboscis is concerned.

A friend writes from a certain town in Oregon: "The druggists of this locality are

absolutely ruining their prescription trade by extortionate charges for prescriptions; so much so that to get away from the criticism of their patients the doctors here are rapidly taking up dispensing; in fact, of twenty-four doctors (all of whom I know) in one building of this city, twenty are now using, or shortly will be using (dispensing) the convenient alkaloidal granules where they had heretofore written prescriptions."

Moral No. 1?

Not long ago we were visited by a good friend from Texas who largely prescribes, but is a reader of *CLINICAL MEDICINE*—as most good doctors are and as all good doctors should be. He just dropped in out of curiosity.

In the course of our visit he said: "Well, Abbott, you surely are all right, but we can not afford to prescribe the alkaloids down in Texas."

"Why not?" I asked.

"Because they are too expensive."

"Why, how is that?" said I.

"My druggist charges more for a prescription of the alkaloidal granules than he does for a corresponding amount of fluid extract, and my patients, although they like the active-principles better, won't stand for the difference in price. For example, for a prescription of thirty-two aconitine granules in four ounces of water my druggist charges my patient 75 cents, and that is too much—more than they can afford to pay. I have expostulated with him, but he says he cannot afford to dispense these remedies any cheaper."

"Do you know how much this costs the druggist?" said I.

"No, I don't."

"Well, here it is: 1,000 aconitine granules (to say nothing about trade discounts for quantity,) cost 80 cents; 100, 8 cents, 32, to be generous, 3 cents. Add bottle, cork and water, necessary expert service to label and count, and there you have it. Not so bad, is it? and no reason why the druggist should charge the exorbitant price that he does."

"Well, I should say not," said my friend, and when he left he voiced his intention to dispense his own remedies in the future.

Moral No. 2?

These are merely illustrations. Druggists don't want the doctors to dispense. Some doctors don't want to dispense; but most doctors are being compelled to dispense by just such foolishness as this. The druggist is bound to get just what he did in these instances, in trying to oppose the introduction of the alkaloids through charging exorbitant prices for them; thus indirectly, and often directly, abusing the doctor for his temerity in daring to use them.

Well, the medical profession is rapidly settling this question, is competent to do it, and will do it, and the way they do it will depend very largely upon the attitude taken by the druggist in the next few years. The convenience and inexpensiveness, to say nothing of the greater efficiency of the active-principle granules, appeals with invariable strength to the doctor himself.

Any doctor can do a practice, prescribing what he wishes, and dispense the alkaloids in emergency work, as he should, on an expense of one to two percent, and so doing will add 25 to 50 percent to his otherwise cash income.

Moral No. 3?

Others are doing it, why don't you? If you do, what is your experience? If you don't, why don't you? Write and tell us all about it, pro or con. It's either the right thing to do or it isn't, and there are good reasons for right things. Let us have it, both sides—if there are two that will stand the light of factful presentation. Write, and do it now, don't wait for the other fellow.

We are but seeds that Fate has sown,
Each on his little patch of earth;
And we are given growth alone
To gauge our worthlessness or worth.

—S. E. Kiser

THE TREATMENT OF TETANUS

In *The Medical World* Dr. J. C. Dreher contributes an interesting letter on the treatment of tetanus. He details two successful cases. The first was treated by physostigmine in doses of 1-4 grain hypodermically. This was repeated every hour for four hours,

by which time all the symptoms had ceased, and there was perfect relaxation of the muscles, a copious bowel movement and free action of the kidneys. Rapid recovery. This was in the case of a boy of thirteen.

The second case was that of a boy of nine years. The alkaloid physostigmine not being at hand, an effort was made to substitute the fluid extract for physostigmine; thirty drops of this was injected every hour. Next day there was but little if any change. The dosage of the injections was increased to sixty drops, and in another day the improvement was marked.

A third case described by the same writer was treated on so-called modern principles at a hospital. The patient died after the third injection of antitetanic serum.

In connection with the above the writer will say that he has frequently noted that after maximum injections of physostigmine, such as 1-50 of a grain, very marked depression ensues, such as will follow very large doses, as from 1-3 of a grain, of pilocarpine. It is only in very small doses that physostigmine exerts a stimulating action; in large doses it is sedative and relaxant. These cases are notable. The treatment should be especially commended to the attention of those having used physostigmine in tetanus, giving 1-100 of a grain, stopping at that and not pushing the remedy to the dosage employed so successfully by Dr. Dreher.

Sympathy—it is the touchstone to every secret, the key to all knowledge, the open sesame to all hearts.

—Elbert Hubbard

WONDERFUL (?) CANCER CURES

I have before me a little pamphlet telling of the "Cain Cancer Cure." This remarkable remedy, which the promoter declares was intrusted to her by the Indians, "eliminates any cancerous growth with its roots from the system within thirty-six to forty-eight hours. Cleanses the blood, heals the wounds and leaves the whole system in a healthy condition. No recurrence. It also removes eczema, warts, corns, birthmarks, tumors, moles, wens, fistula, etc., and purifies and beautifies the system."

Anything that does this is certainly worthy of consideration!

Further along it says: "In woman's breast any lump is cancer. Any lump or sore on lips, face or anywhere six months is cancer." This should certainly be known to the medical profession as it simplifies the art of diagnosis to an astonishing degree.

With such a definition of cancer, we can readily understand the testimonials which are included in the pamphlet. One of these is from a patient who says her "nose is healing up." The next says he had a cancer on his face, the third one on the lower lip, the fourth a sore on the back of the neck, one had a cancer near the eye, another one in the corner of the eye; then comes one in the breast, on the nose, on a finger, on the bottom of the foot, the left cheek, the tongue, a sore upon the neck and one upon the nose of fourteen years' duration; cancer of the lower lip, another on the lip, still another in the same place, and the last one had four cancers removed from his face, and his wife one from her nose.

From the above definition and the quotations it is evident that the good lady who owns this "cancer cure" is not speaking of the same thing which we as physicians term cancer. Nothing whatever is said as to the variety of cancer: scirrhus, epithelioma, encephaloid, colloid or melanotic. No distinction is made between carcinoma and sarcoma, but anything in the way of a lump or sore which has lasted six months is termed cancer. With such a definition, the enthusiasm of the illiterate people who write these testimonials is perhaps pardonable, since their estimate of the dangers of their maladies is based upon the scientific physician's prognosis in cases of genuine cancer.

One testimonial is signed by a Wm. McEwing, M. D., Wichita, Kans. We are relieved to know that that gentleman endorses Nicholas Senn and other surgeons of national repute, and if anything is calculated to make a great surgeon easy in his grave, it would be the knowledge that McEwing confirms his views upon cancer. But Polk's directory seems strangely ignorant of a Wm. McEwing, M. D., and as he speaks of can-

cer as having roots like that of a tree, we are under painful doubts as to his having studied in Vienna, without which of course he is not entitled to an opinion, much less to its expression. His grammar also, as presented by Mrs. Cain, seems somewhat halting, as in the following sentence: "The second growth grows more rapid and more dangerous to handle than the first." Altogether we should like a little more data in regard to Dr. McEwing before affording him our confidence.

These things do an infinite amount of harm. Growths that are not cancerous at all and are amenable to painless and easy treatment are subjected to the action of escharotics, an unnecessarily cruel method, whereas true cancers, which should be subjected to skilled treatment as early as possible in their course, are allowed to go on unchecked until it is too late for permanent benefit from any method or treatment whatsoever. On both sides the injury is a grievance, and while we do not like paternalism in the government there is surely some means of preventing the unfortunate, who do not know any better way, from entrusting themselves to the hands of such an ignoramus as this woman evidently is. Possibly some of our authorities might turn their attention to such nuisances as this with advantage both to the profession and the community.

How would you be
If he, which is the top of judgment, should
But judge you as you are? O think on that;
And mercy then will breathe within your lips,
Like man new made.

—Shakespeare

THE LIMIT OF PREVENTIVE MEDICINE

A new impetus has been given to preventive medicine by the election of Col. W. C. Gorgas of the Panama Canal Commission to the presidency of The American Medical Association. Col. Gorgas, during his useful life and especially during his work in Cuba and Panama, has exemplified, as no other man has, the possibilities in the prevention of disease, and his success in this field naturally suggests that the future has greater things

in store for the student of prophylaxis. Much disease, but mainly that of an infectious character, is unnecessary, and by the active intervention of the state the mortality from these causes may, undoubtedly, be enormously reduced.

The medical profession has always taken the lead in work of this kind, and it is proper that it should, even though this does seem to an outsider to be a form of business suicide. Nothing more clearly shows the disinterested quality of our professional work than this. But while we are all interested in the prevention of disease, and should use every effort possible to that end, we must not lose sight of the fact that the sick, like the poor, are always with us; nor should we cease for one moment our efforts to find means for their cure. It certainly is not the right thing, while our medical leaders are encouraging the study of preventive medicine and our philanthropists are giving millions of dollars to found institutions to undertake this truly great work, that our efforts toward the cure of disease should be relaxed. There is no loss of interest in surgery and its achievements. Our oculists, neurologists and gynecologists complain of no shrinkage in the amount of work they are doing and they seem to anticipate none for the future. Why then should the public be led to believe that drugs are of no value, and that the family physician of the future will be solely occupied in preventing and have nothing to do with curing? We all know that this happy day will never come.

Therefore we insist that hand in hand with labors for prevention should go increasing efforts for curing the sick. The study of our materia medica has only just begun; its possibilities are only half realized. The neglect of this important branch of medical study looked at from any point of view, sociologic, humanitarian or professional, is absolutely inexcusable. Therapeutics is today the most necessary part of the physician's knowledge, and yet to our shame be it said, it is the one branch which is most neglected, most debased and most vilified.

We therefore appeal, as we have so many times in the past, for new interest in and a

closer study of our remedial agents. We appeal for a wider appreciation of the possibilities of active-principle therapy, for we know that given dependable remedies of uniform action, and the skilful application of these remedies, medicine will cease to be despised and scoffed at and will regain the influence which it once held in the hearts of the people. Let us encourage preventive medicine all we can. We will stand shoulder to shoulder with every effort in this direction; but do not let us, while encouraging this, forget that the great mass of our profession must find their principal employment in the future, as in the past, in relieving human suffering and curing disease. And that, frankly, is what *we* are trying to do—and we look to the “family” for help.

Dr. John Smith, of Jonesville, is called to see a patient suffering from appendicitis. He makes six calls, pulls the patient through and gets \$6. Dr. Thomas Jones, of Smithopolis, is called to see another appendicitis patient, performs a “brilliant” operation, patient dies, and he gets \$500. Now—why—?

THE SIGNIFICANCE OF PAIN

Sir William Bennett, in a recent address, reported in *The British Medical Journal*, gives some extremely interesting points upon the clinical aspects of pain. He points out that to gauge its proper value from a diagnostic or prognostic standpoint we must have some knowledge of the temperament of the patient.

Some people are much more susceptible to pain than others, and inability to bear it should not necessarily be ascribed to cowardice. For instance, the colored races are notoriously more indifferent to pain than the white. An illustration is given of a colored porter, from whom, on different occasions, first one-half the upper jaw, then the other half, was removed without an anesthetic; yet this man did not seem to suffer intensely. On the other hand, an army officer, notorious for his reckless bravery in battle, was absolutely unable to control himself when by no means forcible efforts were made to bend a partially stiff joint. Another illustration is given in which a patient, who was having a leg am-

putated by a French surgeon during pre-anesthetic times, complained not of the pain of the operation but because the noise of the saw “set his teeth on edge.”

Some interesting facts are cited concerning the relation of pain to tenderness. It should be remembered that the absence of tenderness over the painful area does not exclude the possibility of there being tenderness elsewhere, so that in all cases careful search should be made along the line of distribution of the nerves supplying the part. Tenderness over the painful area is of three kinds: in the first it is increased by pressure of any kind; in the second it is increased by deep pressure only; and in the third it is increased by superficial pressure and diminished by deep pressure, the last being of course due to psychic causes. If deep pressure increases the pain we have to deal with some organic trouble.

There is no necessary connection between pain and rise of temperature, the latter being absent if there is no inflammatory, septic or infectious trouble; but under ordinary circumstances with the increase of pain there is an increase of pulse-rate. In chronic or subacute pain the pulse may remain normal.

Pain does not necessarily interfere greatly with the nourishment or general condition of an individual. Dr. Bennett cites trigeminal neuralgia in which the suffering is as severe as in almost any other condition to be seen, and in spite of which the patient so afflicted may be apparently robust.

While the disappearance of pain usually means the cessation of the trouble causing it, the physician should never assume this to be the case. The spontaneous disappearance of acute pain may be due either to *relief of tension* or to the supervention of septic *intoxication leading to indifference*. The physician should never forget this fact. Some interesting clinical examples are given to illustrate it.

In a case of appendicitis there was a sudden disappearance of pain, within twenty-four hours after onset. As the pain was relieved, both pulse-rate and temperature declined. The relief of pain in this case was due to the spontaneous evacuation of the bowels, thus

relieving the tension and with it to a considerable extent the concurrent symptoms. In another case of appendicitis there was a similar disappearance of pain, but in this case the pulse-rate did not decline and the temperature after falling to normal rose again within a few hours. In this instance the disappearance of pain was due to "the indifference of septic intoxication," which followed gangrenous changes occurring in the affected appendix. Of course the cessation of pain instead of being a good symptom was a bad one.

A number of other cases are related by Bennett to illustrate the same point, the moral being that unless the disappearance of pain is associated also with the betterment of other disease-symptoms it is not necessarily a favorable sign and may indeed be a very bad one. In some cases the pulse instead of becoming more rapid becomes abnormally slow, and the temperature instead of rising falls to subnormal, and here also is a condition which is extremely suspicious.

Shifting pain, or pain which "moves from place to place," is usually not of serious import, though if occurring in the joints with effusion it may be ascribed to rheumatic or gouty troubles. Furthermore, in pyemia we may have shifting pains, the disappearance of pain in one part with subsidence of fever being followed by the recurrence in another portion of the body with renewed elevation of temperature.

Bennett gives no suggestions concerning methods to be adopted for the relief of pain. Possibly like many others of the "pathologic" school he believes that measures intended for its relief should be avoided, on account of its undoubted diagnostic value. But such a do-nothing policy will not appeal to the patient, who demands relief. If, instead of masking the symptoms with opium, we seek to remedy the pain-cause we shall proceed more happily, as well as more rationally. Bennett gives us the key—which is the *tension*. Relieve that and the pain disappears. The tension of a forming abscess requires the knife, of an engorged organ drainage, of a distended bowel the "clean out." Where the tension is under muscle-

control (as it usually is) even when due to vascular engorgement, atropine or hyoscyamine is the remedy, possibly supported by glonoine, with strychnine as a "bracer."

And the "indifference" of sepsis also has its medicinal indications as well as its surgical ones.

"Them that has gits!" But the man that "has," at the start had to "git"—busy.

AUGUST THE VACATION MONTH

August is, of all the months of the year, of the greatest importance to a very large number of people. It is a month of vacations; the month of rest and recreation; the month of unbending and forgetting; the month of strength-accumulation, and, more important than these, it is the month of preparation.

The business man, the professional man, the mechanic, the clerk and the laborer, from year to year look forward to the grand midsummer that blesses every twelvemonth, and at its approach prepare to leap out of the tightly drawn nets, and forget, for a time, the cares, worries and perplexities of eleven months and some days.

And the women—they are all girls in summer—are as eager for this month as the men. It is their heyday. August would be impossible without them, as would the seashore, the country, and the mountains. But of greatest moment is this month of months to that important class, the school-teachers or educators. They are getting ready for the battles of another year. The days have passed when the requirements of a teacher were the ability to "keep order" and a book knowledge one lesson better than that of the star pupil.

The days were ended a generation ago when the star-pupil could be transferred from the rank of pupil to the position of teacher, for teaching to teach has become a most important feature of our educational system. A normal-school course, once advisable for those contemplating teaching, is now essential, and in later years there have come, to supplement this, the sum-

mer schools or pedagogical institutes that have sprung from the great colleges and universities of the country, with courses generally extending through the month of July. To this may be added the regular work of the higher institutions along pedagogical lines and the postgraduate instruction of the universities.

As to the efficacy of these much may be said, for and against. The pace of advancement in teaching has been of such a revolutionary order that each step has been an experiment, to be abandoned for something apparently better before it has been thoroughly tried, and the threat is even made to revert to the old methods of teaching, though with the new school of teachers.

Our fathers and grandfathers appreciated the fact that the eye teaches infinitely more than the ear, and teachers are beginning to be taught to teach this way. The theoretical is to bend to the practical, and there will be splendid advancement in the physical, mental and moral development of the youth. The theoretically taught medical man must give way to the practically taught medical man. Theory in itself is all right, but practice at the bedside is of the utmost importance, to make a successful practitioner. The two must go hand in hand.

But we have digressed. We were speaking about these youths. Is not August the month of months for them? and, we may add, the month of months for the tired doctor? Indeed it is, for there will not be another so good, it seems to them, until a long and weary bondage has been ended. It is the last bite of the too small cherry, and oh, so quickly gone. Ah, those days, those days! How little appreciated by the most of us who struggled through them, we knew not, we cared not how, wishing them gone and quickly gone. Could we have realized then, as we do later, that our lives were being mapped out for us, even in those days of our youth. It was then that we learned to apply ourselves diligently to the task before us or to slide through the work with the greatest possible ease. It was then that we learned to shirk our duty or to bend our shoulders and fix our eyes with deter-

mination to find all to be found in the subject in hand.

As the boy, so the man, is a truth well to remember. A shift is often made in a field of struggle, but seldom in the method in which that struggle is carried on.

The boy learns this truth most often when it is too late and he is able to hark back to his school-days; from those to trace his later failure to success. Could some means be devised by which teachers could be taught to teach this fact much would be accomplished.

A step in the right direction is being taken in many of our cities where manual-training schools have been established. In these our young men and boys are being taught that life is a practical thing; that there are earnest days ahead of them; that the great issue of earning a living is a vital one. They are being taught how to earn that living in a practical rather than theoretical way. They are being taught not only that there are things to be done, but *how to do them*.

The average boy of yesterday, when his school-days were ended, was competent to clerk in a store or drive a team. He was mentally equipped to *learn* a trade or a profession. The boy of today who has profited by the advantages offered in a manual-training school has all his father had and, with that, the trade already learned, so that, should he see fit, he could go into the world and take care of himself. He has mounted several rungs of the ladder by the guidance of thorough, painstaking, master-mechanics and is just so many steps ahead of the boy who leaves school with a head filled with theories.

PROFESSOR LLOYD IN THE ARIZONA DESERT

We clip the following interesting item from *The Pharmaceutical Era*:

"Prof. John Uri Lloyd, accompanied by his wife and two daughters, has departed on a perilous journey into the wilds of the Arizona deserts from which he will not return for a year or more. Prof. Lloyd's trip is in the interests of scientific research, for he is

going to try to solve the mystery of the cliff-dwellers, which has puzzled historians for years. Prof. Lloyd will also endeavor to verify some theories which he has relating to that mystic emblem, the 'swastika,' which has been found carved into the walls of the dwellings of these primitive tribes. Dr. Lloyd will have with him, besides his family, the scientists, Dr. Munk and Dr. Wellburn, of Los Angeles. A great part of the trip will be made on horseback, across desert land, and fresh water will have to be carried."

Professor Lloyd is a true scientist. Whenever he travels, aside from the pleasure to be derived, he always has some definite end in view. Two or three years ago he made a trip to Asia Minor, and some most interesting contributions to the literature of pharmacy were the result. We shall look for something good as the result of this trip—a truly great one, even if it is made on American soil only. Best wishes!

He is a great man who accepts the lemons that Fate has passed out to him and uses them to start a lemonade stand.—Elbert Hubbard.

THE "ETHICS" OF THE FUTURE

One of our friends, who is always solicitous for our welfare and is not willing that we should stray far from the high-hedged paths reserved for the exclusive use of the "truly-goods" into the pleasant byways of originality, writes us chidingly across the face of one of our "follow-up" postal cards as follows: "The word 'meat' ['meat' for thought—Ed.] is unprofessional, unscientific and unethical. Do not send me cards or communications thus."

My goodness! How our conceptions of "ethics" are lengthening out. Not only are we to be compelled to think according to "authority," but even our language must be chosen to suit those ordained to do our thinking for us. No slang, no metaphors, no grammatical eccentricities will be permitted to the medical man of the future. Another Council may be created to determine just what is "ethical" and "scientific" in literary style. Who knows?

Let us imagine a report of a medical society meeting in the year 1920.

Dr. Squelchem rose ponderously to his feet and in his most impressive tones asked the attention of the chair.

"I regret exceedingly," said he, "to be compelled to report to the Society several serious breaches of professional ethics by one of the members of this organization, Dr. P. Vobiscum. This I do in a purely impersonal way and as a matter of duty."

"What is the nature of the charges which you have to make against the doctor?" inquired the president.

"First," said Dr. Squelchem, "the doctor has been seen consorting with a homeopath. I have no positive information that he has been called into consultation with this irregular, but the facts as given me are extremely ominous."

A member rose timidly in the rear of the room and suggested that inasmuch as homeopaths had attained places of eminence in our beloved profession it might be inexpedient to insist upon this charge too rigorously. A murmur of assent passing through the audience, Dr. Squelchem proceeded as follows:

"There is also considerable evidence to show that Dr. Vobiscum has been dallying with the damnable alkaloidal heresy, that he has talked favorably of this 'unethical' and 'unscientific' mode of medication and that he has even administered alkaloidal remedies to certain of his patients, who previously had been entirely satisfied with the classical methods which have served your president, myself and other honored members of this society for more than half a century—

At this recital of the enormity of the offense charged against Dr. Vobiscum a shudder passed through the audience.

"—but it is only fair to admit," continued Squelchem, "that the doctor denies this charge *in toto*. And I am furthermore convinced that if he ever has been guilty of this most serious offense, under the wholesomely repressive influence of our great society he will return to the methods of the 'fathers' of our faith and the writers of our authorized textbooks, even though this

should involve some dissatisfaction upon the part of his patients."

"But," continued the good doctor, "I have a more serious charge, one which can no longer be overlooked. In his contributions to the medical press, doubtless of some value in themselves, I find that Dr. Vobiscum has been guilty of gross professional and unethical misconduct—he habitually splits his infinitives!"

The president grew pale with horror, a dozen members sprang to their feet in rage and amazement to demand the attention of the chair, and Dr. P. Vobiscum was expelled from membership without a dissenting voice.

With other men sweating blood all around you in desperate efforts to achieve success, do you hold that success is yours by divine right without effort on your part?
—W. C. Holman

THE CULTIVATION OF HYDRASTIS

The United States Department of Agriculture has recently issued a little monograph upon "The Cultivation and Handling of Goldenseal," a medicinal plant which is fast being exterminated from American forests and rapidly increasing in value on account of the enormous demand for it in medicine.

Goldenseal (*hydrastis canadensis*) belongs to the crowfoot family, and grows wild on woody hillsides as far north as New York and Minnesota, south as far as Georgia, and west as far as Missouri. The greatest goldenseal-producing states are Ohio, Indiana, Kentucky and West Virginia. Up to this time only the wild plant has been used in medicine, but the Department of Agriculture has been carrying on some experiments as to the possibility of cultivating it upon a commercial scale, and the results seem to show that this can be done successfully, though the warning is given that prospective growers should proceed with caution, since if it be largely cultivated this would result in over-stocking the market and bringing about such a depression of price as to make it a profitless venture.

At the present time from 200,000 to 300,000 pounds of hydrastis are consumed an-

nually, and of this about one-tenth is used for export. The price of the rhizomes and rootlets, which are the parts employed in medicine, has gradually advanced from 35 to 50 cents a pound, in 1898, to \$1.85 to \$2.10 a pound this year. The physician who desires to embark in the cultivation of medicinal plants (a field whose possibilities we have frequently called attention to) may find it worth while to try his hand at hydrastis. The monograph of the Department of Agriculture, which gives full directions, may be obtained free from the Government Printing Office.

HYDRASTINE IN FLUID PREPARATIONS OF HYDRASTIS

While we are discussing hydrastis we must call attention to an article by Prof. W. A. Puckner upon "The Unofficial Preparations of Hydrastis" which appeared in the *J. A. M. A.*, for July 4. The fluid preparations of this substance made and marketed by ten leading pharmaceutical houses were examined. In no instance was the percentage of the active alkaloid, hydrastine, up to that specified by the Pharmacopeia for the official fluid extract, and in only a few cases did these unofficial preparations even approach the alkaloidal strength claimed by the manufacturer—when any claims at all were made for them. Practically all of these products were found very weak in alkaloidal content and some of them almost inert.

With regard to the colorless preparations of hydrastis, Professor Puckner says that "while the fluid extract of hydrastis contains 2 percent of the alkaloid these preparations contain less than 3-10 percent." Now why, in the name of common-sense, should physicians continue to use these fluid preparations when it is so easy to employ exactly the alkaloid desired, either internally or locally, in known-to-be definite strength? If you wish to administer hydrastine—and all these preparations are standardized (?) to hydrastine strength only—why not use it, or if you want berberine why not employ that? It seems to us that these are pertinent questions.

But there is another pertinent question which we should like to ask Prof. Puckner. The only drugs which he and his associates have examined are the unofficial preparations, and druggist-like, he uses the "darning" facts in condemnation of *all* unofficial preparations, and as a club to drive the physician back to the remedies of the Pharmacopeia. Would it not be a good thing, Professor Puckner, to collect from different drugstores, say right here in the city of Chicago, some samples of the *official* preparations of hydrastis, and submit them to the same careful investigation that you have devoted to the unofficial ones, then give the medical profession the benefit of your studies? We have a suspicion that the results would not be *quite* so favorable to official medicaments as the one-sided arguments which you have thus far submitted would indicate, and we also suspect that as a result of such examinations there would be more excellent arguments for the employment of the alkaloids.

A heart full of philanthropy is right; but look out for "No. 1." The great city specialist, who made that brilliant address you admired so much, may not have been so very much interested in your welfare, while the chances are he was intensely alert as to the possibility of getting some of your patients. Be prepared to "paddle your own canoe"—then do it.

THE VALUE OF TROUBLE

Life is but a school; from its beginning to its very end the lessons learned that are of the greatest value to us are those which we have struggled to learn. The world is a grand old place and we are pretty sure of the reward we deserve. We may grumble and growl at adversity, we may moan and make miserable over misfortune, we may shake under our trouble, but in our inmost hearts we know why we suffer and that the faults that would be convenient to lay on the doorstep of others belong to us. We know what we should do if opportunity be granted us again, and with profit we should be governed by our experiences of the past, avoiding those very things that have brought disaster.

Trouble is a good thing. It checks recklessness, opens the eyes of the blind plunger and draws the unappreciative with a sense of appreciation. As the boatman blindly piloting his craft in an unknown stream receives a bump or two from a hidden rock, which teaches him that there is danger in ignorance, so it is with us all, and at its worst, trouble is but another word for commanding caution, warning, danger. As the misfortunes, the missteps of others are of value to us in our struggles for attainment, so are our errors of value. We would avoid them if we could. We should avoid them; but when they come to us let us bend our shoulders to their burden or pluckily get beneath and throw them off, and let us do it ourselves. It will make us stronger, better men, independent, progressive, and dauntlessly ambitious. It will make of us the very men the world needs and needs badly.

HYPODERMIC ANESTHESIA IN GERMANY

Our esteemed and ever thoughtful "friend," the editor of the *J. A. M. A.*, was guilty of a serious oversight (for which I fear he will be called to account by Trustee Jones) when he permitted to be published in *The Journal* of July 11 an abstract of a paper by Dr. Krönig, of Berlin, upon "Painless Delivery under Scopolamine-Morphine," which appeared originally in the *Deutsche Medizinische Wochenschrift*. Krönig is one of the best-known obstetricians in Germany. In his paper he comments upon the loss of nerve- and will-power in modern society women and the consequent increasing difficulty of childbirth among them. He says that obstetricians practising in the fashionable "West End" of Berlin have to use forceps in nearly 40 percent of their labor-cases, and as a result of the increasing number of instrumental deliveries puerperal fever is becoming more frequent.

On account of the lack of resisting power on the part of these women a demand is constantly made upon the physician to relieve the pains of childbirth, and he believes that

the modern woman is scarcely able to stand the stress of labor. For this purpose he praises in unquestionable terms the scopolamine-morphine anesthesia, or as it is called in Germany, the "twilight sleep." Not only does this combination add immeasurably to the comfort of the patient, but it has reduced the mortality both in mother and in child. Krönig has used this combination in 1500 cases. In his last 500 one mother succumbed to hemorrhage from rupture of the uterus, the family refusing to allow operation, while one child died during delivery and three others in the first three days—not from the anesthetic. He ascribes the low mortality to the benumbing of the respiratory center by the scopolamine, which prevents aspiration of the amniotic fluid.

While the *Journal* of the Association, in its abstract, says that "this theoretical explanation is assailable" the fact nevertheless remains that "with an experience of 1500 cases" the mortality of the child during or immediately after delivery has been much less since the scopolamine technic was introduced, while later reports from nearly 300 of the children delivered by Krönig show that their subsequent development has been normal in all respects.

Krönig insists, just as we in this country have insisted, upon the importance of correct technic and proper adjustment of dosage to individual conditions. The woman must be protected against noise, bright light, etc. Still and caution are necessary on the part of the physician, but given these conditions, success is fairly certain. The hypodermic method of anesthesia is constantly winning new laurels, but absolute purity of drug, a combination which can be depended upon, and good, ordinary, common-sense are indispensable.

We are glad to give proper recognition to *The Journal* of the Association for putting these facts before its readers. Would that it might see the light of justice plainly enough to tell the whole truth about hypodermic anesthesia. But we are good waiters, and are content to bide our time. Meanwhile the number of those who use hyoscine-morphine is constantly increasing, and their

comments upon its effects, as their knowledge of the remedy and the way to use it grows, are becoming more and more favorable.

"Just keep your heart abating warm.

Be kind to every fellow;

Look for rainbows in the storm—

But carry an umbrella."

—The "Red Back"

ALCOHOLIC "PATENTS" UNDER THE BAN

We learn from *N. A. R. D. Notes* that commencing with July 1, 72 "patents" containing alcohol and "insufficiently medicated to render them unsuitable for use as a beverage" have been placed "under the ban," this making a total of 126 preparations of this class which cannot be sold by druggists unless they pay the special U. S. Revenue tax applicable to retail liquor dealers.

This is perfectly right and proper, and the action of the Revenue Department should have, as doubtless it does, the approval of all the better element of the pharmaceutical profession. There is a horde of these vicious preparations which serve to whet the appetite for strong drink, and many of them more or less openly bid for liquor business, especially in local-option territory and prohibition states. Because their purpose is disguised by their masquerade as "medicine" they are really more dangerous than whisky itself, while as regards quality they are infinitely inferior.

But while there is danger from the "patents" there are the same possibilities for cultivating the appetite for drink in many official and N. F. preparations. All they lack to become popular is advertising. Fortunately every billboard does not shout to heaven of their alleged virtues.

As an illustration of the "drinkability" of some of these things I can cite among official preparations the compound spirit of ether, which in some parts of Great Britain is quite a fashionable tippie; spirit of nitrous ether, which occasionally is used as a beverage; compound spirit of orange, spirit of lavender, compound spirit of juniper and even

spirit of camphor, which are all used for their alcohol action to greater or less extent. Among the tinctures thus employed are those of orange peel, quassia, calumba (excellent "bitters"), cardamom, cinnamon, lavender, ginger, and even cinchona and more powerful drugs. There is a long list of elixirs and wines, many of which are rich enough in alcohol to serve as exciters of the appetite.

I do not believe that the dangers of these things are really appreciated as they should be. We are kept well informed of the dangerous "patents," but physicians as a rule do not appreciate the possibilities for evil of the strong alcoholic preparations of the Pharmacopeia.

IN SPITE OF MONEY

Money is not the only great force in the world, nor is it the greatest. More powerful than organized and aggressive wealth is manhood itself. There inevitably comes a time when the plain people (who in the end are the real rulers) rebel at the domination of the money-god and seek new leaders, men whose faith in humanity and the "square deal" transcends their awe of the financial over-lord. A really strong, big-hearted, big-brained, aggressive man with the people behind him can conquer, in spite of mere money.

This presidential year we have twice seen this fact exemplified. In each of the conventions of the two great parties it was one man who controlled—a man who defied the hosts of plutocracy and went direct to the people. These men are idolized by their followers—by the American people—because they stand for something in which the people believe, and because they are willing to fight for it. The "interests" have been overwhelmed by the tenaciousness with which the people have stood by these two men, Roosevelt and Bryan, who represent real vital principles, not dead issues.

And so it is everywhere, even in medicine. The man who is trying to do right, who is working for others as well as for himself—who is actuated by high motives and im-

pelled to great endeavor by faith in the verity and importance of the truths for which he stands, will carry the people with him in the future as he has in the past. The "square deal" is graven deep in the heart of every real man, and no such man will stand by unconcerned while those occupying official positions and backed by the wealth of organized industry use the resources at their command to crush out the lives and nullify the honest uplift efforts of their friends. We know it!

Strong men are not infallible. Indeed, they make *more* mistakes than other men—because, through their earnest desire to serve, they *do* more that is really worth while. Roosevelt has made many mistakes, and in a sense their number is a measure of his greatness. Sometimes he will realize that he has been too liberal with epithets, too abusive of those who disagreed with him, and that he has exercised the power of his great office too autocratically. Bryan has already recognized the futility if not the foolishness of the free-silver movement which he led with all the vigor of his young manhood.

We ourselves are embarked in a great therapeutic movement. It is one which concerns every doctor, because its aim is to give practical service to every member of our profession. Its benefits are not remote. They are here now, today. Therefore there are no endowments to stimulate its growth nor rich institutions to give it the prestige of their support. It is so simple that any man can understand it. It has grown to its present strength in the hearts of the doctors of this and other countries upon merit alone, absolutely unaided by "authority" and in the face of the most active and the most malignant opposition. It is the work of men who believe that in active-principle therapeutics there is something worth fighting for and believing this, they are unterrified by the assaults of the "authority"-backed forces of the money-god. We stand for great principles, of vital interest to all physicians.

"Money talks." Well, let it! We pin our faith to manhood every time and ask only for the "square deal." Truth and right will win in the end.



A STUDY OF CACTUS GRANDIFLORUS

A demonstration of the fact that theoretical pharmacology and practical clinical experience do not always agree. A presentation of the case for the latter

By GEORGE F. BUTLER, M. D., Chicago, Illinois

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ALBRECHT VON HALLER, the father of the science of physiology, gave, in the preface to his Swiss Pharmacopeia, in 1755, the following remarkable directions: "In the first place, the remedy is to be tried on the healthy body, without any foreign substance mixed with it; having been examined as to its odor and taste, a small dose is to be taken, and the attention directed to all effects which thereupon occur, such as upon the pulse, the temperature, the respiration, the excretions. Having thereby adduced their obvious phenomena in health, you may pass on to experiment upon the sick body."

To Haller perhaps more than to anyone else we are indebted for the science of so-called pharmacology, although Buchheim, who established the first pharmacologic laboratory nearly a century later, may be considered the founder of modern pharmacology.

It is generally believed that physiological experimentation with drugs must be the basis of their therapeutical employment. Still, in the words of Brown-Sequard, "therapeutics will cease to be empirical only when this last kind of knowledge shall be fully obtained;" but its fulness will never

be fully realized unless the results have been thoroughly considered with regard to the differences due to the action of drugs *in different doses on the human organism in health and disease*. Not upon dogs, rabbits, guinea-pigs, etc., but upon *human beings*; not only under physiological but under pathological conditions as well. The present-day pharmacological experiment with a drug on a perfectly healthy pup is of no value whatever as to the therapeutic indications for that drug without corroboration on a sick human being. The action, moreover, of a drug upon a healthy human being is not necessarily a true indication of what its action would be on the same individual were he ill.

So noted a pharmacologist as Dr. Arthur R. Cushny, Professor of Pharmacology in University College, London, England, says regarding this matter: "Pathological conditions very often modify the effects of drugs to a very considerable extent and in a way which cannot be explained at present. For example, the antipyretics reduce the temperature in fever, but have no effect on it in health; the bromides lessen the convulsions in epilepsy, but have much less effect in depressing the brain in normal

persons. The question may therefore be raised whether the examination of the effects of drugs in normal animals is of much value in indicating their therapeutic action."

What Cushny Says of Clinical Experience

Referring to the value of clinical experience and its relation to pharmacology Cushny says: "The aims of the pharmacologist and the clinician are not identical. The former seeks to solve the problem how the drug acts in a given case, while the primary object of the latter is to remedy the condition by any means in his power. Thus, in a case of heart weakness the clinician prescribes some remedy which he has found of benefit in other similar cases and regards only as of secondary interest the question which to the pharmacologist is the absorbing one, namely, whether the drug acts on the heart directly or through some other organ. Quinine destroys the organism of malarial fever, but this could never have been anticipated from its action on the normal tissues, and could only be discovered by experiments on the organism or rather by experiments on persons suffering from the disease, as the organism has been recognized only of late years."

We cannot ignore the results of clinical experience. The pharmacologists, some of them at least, insist too strongly on inductions drawn from animal-experiments and refuse to admit results which have been obtained in thousands of cases of disease by competent observers. We know pharmacologists who question the medicinal value of iron because they are unable to explain satisfactorily its action. Yet the metal has been used for many years in a form of anemia, and its curative properties are attested by many thousands of cases and by generations of practical physicians.

Dr. Torald Sollman, the well-known pharmacologist, says: "The action of drugs is not always the same in disease as in health. The differences are, however, as a rule quantitative rather than qualitative. Since the drugs are in practice employed most extensively in disease, their action in these conditions is of the greatest impor-

tance. As a general rule, it is possible to explain, and even to predict, the action of drugs in disease from their action on normal tissues. However, the actual test must always be made. Animal-experiments are of but limited value in this connection, and we are forced to rely mainly on observations on patients. It is also highly desirable that every physician should obtain his knowledge of the therapeutic action of drugs at first hand. He should utilize every case under his care for this purpose and conduct his treatment as if it were a critical experiment, the interests of the patient being of course paramount. The conclusions will be greatly simplified if but one drug is used at a time."

How Different Animals React to Drugs

We cannot always judge of the therapeutic value of a drug by its action or non-action on certain animals. For instance, rats are incapable of vomiting, and are therefore not affected by emetics. Atropine quickens the heart of the dog, but not that of the rabbit, because it acts by paralyzing the vagus, which is not tonically active in the rabbit. "There are a number of differences," says Sollmann, "which *cannot yet be explained on a physiologic basis*, as for instance the tolerance of rabbits, etc., to the toxic effect of atropine." Strychnine has but very little influence on guinea-pigs and on some monkeys.

"It will be seen," says Sollmann, "that great care must be used in applying the results of experimental pharmacology to man. The neglect of this precaution, the drawing of far-reaching conclusions from a few limited experiments, threw discredit on pharmacology in its earlier days and is still seen all too frequently. Pharmacology cannot be held responsible for this misapplication of its data by half-trained enthusiasts. Its scope is really limited to its own results and not to their application although it may legitimately suggest the latter. It should not be made to replace the science of therapeutics, but should only aim to place well-studied tools in the hands of the latter. If this limitation is realized, if the therapist will carefully study the results of pharma-

cology and will utilize and interpret them in the light of bedside-experience, then pharmacology will be of great value to medicine."

Different Effects in Different Conditions

From what has been said it will be seen that certain drugs will produce certain effects in abnormal conditions that they will not produce in normal states. For example, a dose of 10 grains of antipyrin will not affect the temperature of a normal man, but if 10 grains of antipyrin be given to a person with a temperature of 104° F., in all probability his temperature will be reduced. On the other hand, certain pathological conditions interfere with the therapeutic action of certain drugs; thus pharmacologists have discovered that high temperature greatly interferes with the action of digitalis. In this they are abundantly sustained by general clinical experience; very commonly in high fever it seems almost impossible to obtain the digitalis-pulse; that the effect or noneffect of a certain drug on an animal does not necessarily indicate to us its use or value in the treatment of sick human beings; that pharmacological experiments are of no value to the physician unless they can be corroborated at the bedside; in a word, a drug, that it has been demonstrated by a great number of physicians in a great number of cases to be of value in certain cases, *is of value* even though in the hands of pharmacologists it is found to be inert on "a mongrel bitch." And on the contrary, a drug may possess certain decided action on a healthy, robust bull-pup without having any remedial influence whatever on a sick baby. So, after all has been said, *the results of clinical experience* are alone valuable to us.

Recently there has been much controversy regarding the value of cactus grandiflorus as a cardiac remedy. Hatcher, September 21, 1907 (*Journal A. M. A.*), and Matthews, March 21, 1908 (*ibid.*), say that, judging from their experiments on animals, the drug is inert, and a seriocomic editorial in *The Journal of the American Medical Association*, September 21, 1907, closed with these words:

"Everyone is free to draw his own conclusions from the facts presented by Dr. Hatcher. Our own conclusion is that those who lean on cactus in the treatment of cardiac diseases do not even lean on a broken reed, but on nothing more substantial than air."

After reading what might be termed an authoritative ultimatum from the aforesaid authorities (?) on the subject of cactus, I wondered whether I had been deceived during the past ten years: that the apparent benefits were due to "rest," "coincidence," "some other drug that was being taken at the time," that I had been self-hypnotized, as it were, when all the time I had been "leaning on nothing more substantial than air."

I was interested to learn what others thought about cactus, and I found more favorable reports than could be printed in a dozen issues of this journal. I will quote from a few men whose skill and reputation are fully equal to those of Messrs. Hatcher, Matthews, Simmons *et al.*, while some of them are perhaps superior as clinicians if not as pharmacologists.

Reports of Various Experimentors

Dr. O. M. Myers' original report on cactus appeared in *The New York Medical Journal*, June 13, 1891. He found that therapeutic doses in man and animals produced, primarily, acceleration of the pulse and increased arterial pressure, secondarily diminishing both; pulsations became arrhythmic and finally ceased with arrest in systole. Systoles just before death became very incomplete, due to superirritability of the cardiac ganglia. Death was preceded by tetanic and clonic convulsions, due to overstimulation of the motor-side of the cord—not of cerebral origin, motor-nerves unaffected. He found cactus a powerful spinal stimulant, acting by direct stimulation of the intracardiac accelerator-ganglion.

(1) It increases musculomotor energy of the heart. (2) Elevates arterial tension. (3) Influences the nervous system.

Prof. L. E. Sayre writes in *The Practical Druggist* as follows: "When applied di-

rectly to the exposed heart of a dog there seems to be no perceptible reaction. Upon subcutaneous injection into the dorsal lymph-space an action seems to be apparent. There was seemingly an increase in the amplitude of the heart and an indication of a strengthened beat or increased force."

Note especially the unwillingness with which Prof. Sayre acknowledges that he obtained some results from the administration of this remedy. His language is the reverse of scientific. He either had a result from the drug or he did not. When a man says there was "seemingly an increase," what does he mean? In view of the recently expressed bitter antagonism against this drug, consequent upon the work of Abbott and others, we feel warranted in inferring that there *was* an action which he could not deny and which his language sought to minimize to the utmost extent. What else can we make out of it?

What the Dispensatory Says

"The National Standard Dispensatory," 1905, page 323, states that the activity must be confined to the flower at some special stage of development, or to some part of it, or some part collected with it. "It stimulates the cardiac muscle, the accelerator-nerves and the motor-ganglia of the heart, thereby increasing the force and the frequency of the heart's action. The increase in blood-pressure is due both to its stimulating effect upon the vasomotor center and to the above-named action upon the heart."

Treat's "Annuals" contain several references to cactus, as follows (1891, page 14): "The juice of the cactus is used locally as a poultice for gout, etc., as an application to corns, as a pustulant to the skin; internally as an anthelmintic and a remedy for dropsy. Rubini presented it as a remedy for functional heart diseases, asserting that its action closely corresponded to that of aconite. Kunge confirmed this report, and also employed cactus for angina pectoris." Hale ("New Remedies") said that hypertrophy with enlargement is better controlled by cactus than hypertrophy with dilation,

reversing the indication for digitalis. A characteristic indication he gave for cactus was the sensation as if the heart were constricted by an iron band. The reviewer, Percy Wilds, says he has used this remedy for years, finding most benefit when there was overaction of the heart with throbbing carotids.

Orlando Jones (*British Medical Journal*, January 11, 1890) says the benefit is often most marked when the heart has been overstimulated, as in delirium tremens, and it is liable to disappoint when given for a heart long and excessively enfeebled. Brunton divides digitalis-stimulation into three stages: (1) Vagus stimulation; (2) sudden depression of the vasomotor apparatus of the renal arteries; (3) depression of the vagus, exhaustion of the ganglia, weakening of the heart and failure of the circulation. *With cactus the final stage is a strengthening of the heart with improving circulation.* Jones limits digitalis to sthenic and overstimulated heart conditions, and cactus to asthenic cardiac states. In exophthalmic goiter Watson Williams (page 228) pronounces cactus superior to strophanthus, sparteine or ouabaine.

Williams' Report on Cactus

In "The International Medical Annual" for 1892, in the Section on Therapeutics, Percy Wilde has the following to say on cactus: "The paper read by Dr. Watson Williams at a recent meeting of The British Medical Association contains precisely the information which we are anxious to obtain before trying a new remedy, and if the indications he gives are confirmed by subsequent experiences, a very valuable addition will have been made to our therapeutic resources. Dr. Williams quotes Myers' experiments, and says that the results serve to uphold the clinical results obtained by Williams, who gives the indications for its employment based on its use in upwards of 200 cases. He says:

"It is especially in functional disorders of the heart that cactus will be found useful. In fact, in these cases I now but rarely prescribe any other cardiac remedy. In

the distressing palpitation in certain forms of dyspepsia, and due to reflex-irritation, it hardly ever fails to quickly relieve. In cases of functional palpitation the attacks generally come on when the patient is resting and pass off during considerable exertion; they are often most frequent and most distressing when the patient is at rest in bed. The best results I have obtained by small doses; 1-2 to 1 minim every quarter of an hour during the attacks, and 2 or 3 minims of the tincture of cactus three times daily."

"Palpitation in anemia does not appear to be so much benefited by cactus alone though some of these cases are relieved to a certain extent. When menorrhagia, metrorrhagia or dysmenorrhea is accompanied by palpitation, cactus may be advantageously combined with the other appropriate remedies.

"In several cases of Graves's disease it succeeded in greatly relieving palpitation and nervousness; and especially in a female patient, aged 63, treated at the Bristol Royal Infirmary, who complained chiefly of attacks of palpitation and an indescribable sense of fear accompanying them. For five weeks she had had attacks coming on every night about 1 a. m., which prevented her lying down and kept her awake for the rest of the night, in addition to attacks during the day. She had a soft mitral *bruit* at the apex. Pulse 168, regular. Von Graefe's symptom was also present, proptosis was only slight. He gave her 5 minims of this tincture every four hours. She had a very good night, no attack of palpitation, nor had she any attacks for a whole week. In twenty-four hours the pulse was reduced from 168 to 94 per minute.

"The tobacco-heart, the palpitation of hearts hypertrophied from prolonged and excessive exercise, are excellent cases for this remedy.

Its Value in Sexual Exhaustion

Dr. Williams fully confirms Pitzer's claim that in *sexual exhaustion* nothing gives such speedy relief as cactus. He says that "the action of cactus on the motor-

nerve centers of the spine as well as on the heart explains its satisfactory employment in such cases. In fact all these cases of palpitation and rapid heart-action being relieved by a drug like cactus are explained when we remember they are the result of exhaustion and therefore hyperexcitability of the accelerator-nerves of the heart. A small dose of cactus has a tonic action on the exhausted cardiac innervation, and thus the rapid and often irregular or intermittent pulse becomes lessened in frequency. But an abnormally slow and feeble pulse may be quickened and strengthened by this same drug stimulating the cardiac ganglia and muscle, and if it be pushed may even give rise to a very rapid pulse, the same drug having apparently opposite effects in varying conditions.

"In organic diseases of the heart cactus, if less generally applicable, is none the less valuable in its restricted sphere, for it seems to be of greatest value just where digitalis, strophanthus and other cardiac tonics have failed. Cactus is indicated in hypertrophied hearts, when the hypertrophy ceases to be compensatory, and more especially in aortic regurgitation. In cases of uncomplicated aortic regurgitation the author avoids digitalis because it prolongs the diastolic period, and thus tends to increase the dilatation of the left ventricle and also raises an already increased arterial tension. While cactus strengthens the ventricular systole it also tends to shorten the diastole, and thus it succors the heart in two ways, and this without having such a marked action upon the vasomotor-centers as digitalis. Many cases of angina pectoris are the result of partial failure of the heart. Here cactus will often relieve the anginal pains by giving the heart the necessary fillip for it to maintain the arterial tension without becoming exhausted and tends to prevent their recurrence by giving tone to the vasomotor-centers. In the graver cases of angina this is not sufficient, and the administration of glonoin becomes necessary.

"A patient with a double aortic *bruit* and enormous hypertrophy, under the author's care at the British Royal Infirmary for

eighteen months, complained of typical anginal pains accompanied by the most distressing palpitation and throbbing of the carotids. For about a year these were always most rapidly relieved by small doses of cactus. More recently the regular administration of cactus has simply lessened the intensity and frequency of the attacks and relieved the palpitation; but when the anginal spasms occur he is obliged to resort to his glonoin."

Engstad states that in angina pectoris cactus is almost a specific, saying: "I have never been disappointed in its results, I shall probably, in the future, meet with cases that will not be amenable to treatment, but thus far angina pectoris has been easy to relieve by the use of the remedy." In the so-called pseudo-angina, and in the milder forms of the true angina, it may almost be styled a specific, but it cannot entirely make up for the shortcomings of a relatively or absolutely very incompetent heart, and it is fortunate that we have not to rely on cactus alone in angina.

Its Use in Mitral Disease

In mitral regurgitation and dilated, thin-walled hearts, Dr. Williams has not found cactus of so much use. Here digitalis and its congeners reign supreme. A certain amount of improvement follows the administration of cactus in most cases; the pulse improves in force and rhythm, the urine is increased when it has been deficient, and dropsy may be made to disappear, but compared with digitalis or even strophanthus it is decidedly less efficacious.

In most cases of mitral obstruction with regurgitation he has found cactus of little or no service. In simple mitral obstruction, palpitation and shortness of breath are sometimes much relieved, but its property of shortening the diastole obviously tends to contraindicate its employment in mitral obstruction, since it shortens the time for the auricle to empty itself. In concluding his article Dr. Williams says:

"I would point out that the attempt that is being made, particularly in the United States, to substitute cactus for digitalis,

will certainly lead to disappointment. But in its proper sphere it will certainly prove one of our most reliable drugs. I have endeavored to indicate the conditions which call for the administration of cactus, and for the most part it will be found that they are just the conditions in which we desire to avoid the digitalis class of cardiac remedies, or in which we have hitherto had recourse to them for want of a more suitable substitute.

"Cactus has been compared to aconite; I think however that digitalis, cactus and aconite may each be regarded as a type of three distinct classes of cardiac remedies; digitalis stimulating the vagus nerve-endings and cardiac muscles, prolonging the diastole; cactus acting chiefly on the accelerator-nerves of the heart and sympathetic ganglia, shortening the diastole, and stimulating the spinal motor-nerve centers; while aconite is a direct and powerful depressant of the heart, rapidly paralyzing the cardiac muscles and, unlike the two former drugs, lowering arterial tension by depressing the vasomotor-center, and also depressing the motor centers of the spinal cord." (Reference: *Practitioner*, October, 1891.)

Myers found cactus especially valuable during the critical periods of adynamic fevers. In organic heart disease cactus is most valuable where digitalis fails, as when hypertrophy just ceases to be compensatory, and in aortic regurgitation. In pseudo-angino cactus is almost specific. In mitral disease it is of little value. Harvey and Bird recommended cactus in rheumatism when the joints are much affected, and to prevent or relieve heart complications.

The Opinion of Professor Hare

In the "Annual" for 1903, Hobart A. Hare reviews the testimony and says that cactus possesses distinct value when the heart-sounds lack quality and tone, the heart-action being irregular. Zelenski praised it in valvular disease with dropsy, and Hare confirms its applicability in functional diseases. He adds that its lack of toxicity permits long administration. He recommends it also for weak circulation

from sexual excess or from uterine affections.

In the "Annual" for 1905 Carter recommends cactus because it does not cumulate or wear itself out; and to follow digitalis. Cactus is also useful in convalescence from acute disease, and for the weak heart of old age when digitalis is contraindicated as raising blood-pressure too much.

Liebreich confirms these reports as to the physiologic action of cactus, but objects to the uncertain dosage, since one fluid extract is recommended by the manufacturer in doses of 2 drops; another places the dose of his fluid extract at 30 drops.

Following are quotations from standard works: From Stevens' "Modern Materia Medica and Therapeutics," fourth edition.

"Like digitalis increases the arterial pressure, probably by stimulating the heart itself and the vasomotor center. It does not disturb the stomach, and it appears to be free from cumulative action. It is sometimes employed with advantage in functional affections of the heart, in simple dilation, and in valvular disease with failing compensation when digitalis is not well borne."

From Potter's "Materia Medica, Pharmacology and Therapeutics:" "Therapeutically this drug has been employed as a cardiac stimulant in the functional disorders of the heart, connected with anemia, neurasthenia, dyspepsia, tobacco-poisoning, exophthalmos, sexual exhaustion and low fevers, also in pseudoangina pectoris. It does not prolong the diastole as digitalis does, and on this account it has been especially recommended in complicated aortic regurgitation."

From "Clinical Lectures on Heart, Lungs and Pleura," by Joseph M. Patton, M. D., Professor of Internal Medicine, Chicago Polyclinic: "Cactus has been specially recommended in myocarditis, angina pectoris and cardiac arrhythmia, and weakness following acute fevers."

Dr. John Aulsebrook, of Philadelphia, says: "We are often confronted with patients who suffer from exhaustion, with irregular or intermittent pulse, due to the use of unpalatable remedies like nux vomica; we

have cactus which is rather agreeable than otherwise to most persons, and the effect upon the system and circulatory apparatus is quickly apparent. The patient should take five to ten drops three times daily. The same treatment is indicated for the relief of a similar affection, which often affects those accustomed to the inordinate use of tea. The active principle, theine, it has been found, will cause the heart to intermit, but in cactus we have a drug which meets this emergency."

Dr. Alfred K. Hills, writing on cactus grandiflorus as a substitute for digitalis (*The Practitioner*), says that the former can not be substituted for the latter upon any but theoretical grounds. Cactus, he says, proves palliative in cases of hypertrophy of the heart where the characteristic constriction and dilation are not predominant, while digitalis is more likely to palliate in cases where dilation and the pulse show feebleness.

The Deadly Parallel

The following is interesting as coming ostensibly from the same source.

PHYSIOLOGICAL ACTION.—The drug (cactus) has been studied by Myers, Boinet and Teissier, who have found that it causes a distinct increase of arterial pressure, but does not slow the pulse, sometimes increases its rapidity. Myers has also shown that the drug is a stimulant to the vasomotor centers and to the motor ganglia of the heart-muscle. It also acts as a stimulant rather than a depressant to the spinal cord.

THERAPEUTICS.—Cactus grandiflorus has proved itself a good substitute for digitalis in certain diseases of the circulatory apparatus such as cardiac palpitation and weakness. It has also been found very serviceable as a remedy in cardiac failure, the result of valvular disease, but in all such cases seems to act best when added to some more powerful drug, such as digitalis, as it takes the part of an adjuvant. Cactus also acts well in some cases of angina pectoris.

ADMINISTRATION.—The dose of the tincture of cactus is 2 to 8 minims (0.1—0.50) and of the fluid extract 2 to 4 minims (0.1—0.25).

UNDESIRABLE EFFECTS.—It is claimed that these do not occur, and that the drug never produces a cumulative effect.—Hare's "Therapeutics," Edition of 1905, page 134.

For a number of years a considerable number of practitioners have been under the impression that cactus grandiflorus possesses certain virtues as a cardiac stimulant, while others have considered that its stimulant effect is feeble, but have believed that it exercised a sedative or regulating influence upon the cardiac viscera.

Those who have been most rational in this matter have, however, never believed that cactus possessed very great power, and certain investigations which have been carried on during the last years seem to prove pretty clearly that even a moderate degree of activity is not possessed by this drug.—Editorial in "The Therapeutic Gazette" (Hare, editor), November 15, 1907.

The man who occupies the chair of Therapeutics in Jefferson Medical College will always be listened to with respect. We trust that he himself is sufficiently aware of the responsibility resting upon him to show corresponding solicitude as to the absolute accuracy of the statements that he may make from that elevated position. Most assuredly he will himself be judged thereby; and if it should prove that he has rashly endorsed statements made by incompetent or prejudiced judges, on insufficient grounds, and has lent the weight of his influence to the dissemination of error, both he and the college with which he is connected must suffer in the estimation of the medical public.

Mikhailoff describes two cases of Graves's disease, three of cardiac organic affections and two of chronic parenchymatous nephritis, in which he used cactus. He found its administration rapidly induced a rise of arterial tension, which, however, was but very slight and disappeared shortly after discontinuing the drug. In cases of Graves's disease the secretion of urine increased, while in a patient with renal disease it remained unaltered. Cardiac palpitation and dyspnea quickly subsided, this effect being especially pronounced in exophthalmic goiter. To secure a marked and permanent improvement, a prolonged administration of the remedy in gradually increasing doses seemed to be necessary. (*British Medical Journal*.)

Rudolph Myers, M. D., in a paper read before the Huntington County (Pennsylvania) Medical Society, March 13, 1906, says: "Cactus regulates the heart, quiets the nervous irritability and often renders larger doses or the constant use of strong cardiac tonics unnecessary. It is used when the heart is weak in convalescence, when it is debilitated from old age, when digitalis is contraindicated, in angina pectoris, and in functional disorders of the organ such as the tobacco-heart, the alcoholic heart, etc. It acts very well in cases contraindicating digitalis, such as degeneration of the cardiac muscle, and in the heart weakness of Graves' disease, anemia and sexual exhaustion."—(*Pennsylvania Medical Journal*.)

John T. Thomas, L. R. C. P., etc., Torquay, England, says he has used cactus and found it invaluable in cases of weak heart. It has been of great use in cases of angina pectoris following influenza, and also in a case of aortic regurgitation with absence of compensatory hypertrophy, and complicated with vertigo. He has also taken it himself for anginal attacks with great benefit.

From Chicago and Philadelphia

Prof. John A. Robinson, A. M., M. D., Chicago, Illinois, adds his testimony to the efficacy of cactus in heart disease of various forms. He had under treatment a case of essential paroxysmal tachycardia, the result of excessive tobacco chewing, in which the only remedy which gave relief was cactus. He has used it with signal success in various forms of organic and functional disease.

A case lectured on by Prof. S. Solis Cohen exhibited the good effects of the persistent use of cactus in relieving cardiac pain. The lesion was mitral obstruction with leakage in a woman thirty years of age. The lecturer stated that his own experience with this drug had been unsatisfactory and he had not used it for more than a year past. In the present instance, it had been prescribed by his chief of clinic, Dr. Riesman, in whose hands the results had certainly been good. He was therefore encouraged to renew his own resort to cactus, and to give it for longer periods before again abandoning it. The dose in the case demonstrated was twenty drops of the fluid extract three times a day. (*Philadelphia Polyclinic*.)

In *The Pennsylvania Medical Journal*, 1904, No. 10, Dr. Cohen says: "Cactus is an excellent remedy in cardiac pain."

The eclectic views concerning cactus are thus summed up in an editorial in *The Eclectic Medical Gleaner* for November, 1907: "Cactus is the remedy for enfeeblement of the heart. An old-school writer of prominence has said of it that cactus is the only remedy that will quicken a slow heart. The verdict of eclectic practitioners, who are the largest users of the drug, inclines toward the view that cactus is a remedy chiefly for

functional disorders of the heart due to a nervous origin. It is, therefore, a nerve remedy primarily and a heart remedy secondarily.

"Eclectics have also noted that it improves the nutrition of the heart-muscle and thus is, in a measure, a structural remedy also. By improving the nutrition of the organ it is possible in some instances to correct structural abnormalities. Valvular troubles have been gradually noted to disappear under its prolonged administration. Unlike digitalis it does not disorder the stomach nor is it cumulative. Cactus acts upon the vessels through the vasomotor apparatus. It is a valuable remedy for the heart symptoms of neurasthenia and those incident to female disorders. Aortic regurgitation is always benefited by it. It is useful in progressive valvular weakness, but is contraindicated in stenotic conditions. For tobacco-heart few remedies equal it. It is a remedy for heart pains, palpitation, cardiac dyspnea and intermission in rhythm. Mental depression is a prominent trait in patients requiring cactus. In spasm of the heart muscle it is the most prompt of all cardiacs.

"The heart-action benefited by cactus may be feeble or tumultuous, and is usually irregular. It always shows a lack of innervation. The more excitable the patient, the more certain the effect of the remedy. A sense of constriction, as if a band were about the part, whether it be of heart or other viscera, is a characteristic indication of cactus. When nervous heart irregularities are associated with female disease, or with the menopause, it is a decided remedy for good. Few agents excel it in menstrual headache and headache in women with pressure on the top of the head.

"When the heart is enfeebled from long illness as in convalescence from typhoid or other fevers cactus is invaluable. Even in incurable conditions of the heart it seldom fails to give relief. It frequently relieves angina pectoris, neuralgia, and rheumatism of the heart, and is sometimes useful in endocarditis and pericarditis following debilitating disease. The heart-debility induced by overwork, strain, overenthusiastic ath-

letics and that accompanying or following masturbation, find relief in cactus. The indications are few and indirect: Impaired heart-action, whether feeble, irregular or tumultuous; cardiac disorders with mental depression, precordial oppression and apprehension of danger or death; nervous disorders with feeble heart-action; tobacco-heart; hysteria with enfeebled circulation; vertex headache, vasomotor spasms."

The Homeopathic View

The Medical Forum for December, 1907, presents the following concerning cactus, as viewed by the homeopathist: "This has a great reputation among the eclectics as well as among the homeopaths. It is a remedy chiefly for the functional action of the heart, spending its greatest force on its nervous mechanism, affecting perhaps the sympathetic nervous system chiefly. This may, however, tend to increase the nutrition and also the waste of the heart-muscles. Therefore it may induce organic changes in a moderate way, decreasing hypertrophy and increasing muscular strength in dilation of the heart in its initial stages, and incidentally it may become of value in mitral regurgitation due to mitral insufficiency. The special indications for cactus are:

"1. Feeling of a bandlike constriction, as if an iron band prevented its movement.

"2. Irregularity of the heart-action. It may be rapid or slow, sometimes weak and then strong.

"3. Irritability of the heart-action due to the use of tobacco.

"4. Palpitation due to mental emotions, such as love affairs.

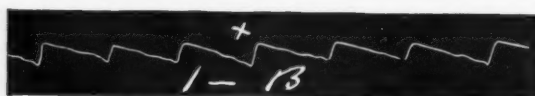
"5. Heart disorders, marked by great nervousness, anxiety and apprehension of death.

"6. Dull, heavy pain, worse from pressure. Pains often radiate down the left arm to the fingers."

My own personal experience with cactus warrants me in believing that it is as valuable a remedy in certain cardiopathies as digitalis is for certain conditions.

For five years, while I was Medical Superintendent of the Alma Springs Sanitarium,

Alma, Mich., I used cactus in a very large number of cases under my care. The preparation I used then was Lloyd's specific cactus, not because I practise eclectic medicine, but because I found his preparations very reliable—the most reliable of any with which I was then acquainted; later I have used Abbott's cactin with excellent, even better, results.



The patients to whom I administered cactus were decidedly benefited, almost without exception. I found it to be remarkably efficacious in functional irregularity of the heart, in cardiac irregularity and the arrhythmia of neurasthenia, sexual neurasthenia especially; in "tobacco-heart," in cardiac weakness following acute diseases, and in many cases of myocarditis. I regret that I have no pulse-tracings of the numerous cases I treated with cactus in the sanitarium, but whatever may be the opinion of certain men regarding the value of this drug I know that I have benefited a large number of cases with cactus, as well as I know that I have helped patients with digitalis.

An Exhibit of Sphygmographic Tracings

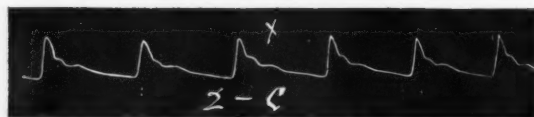
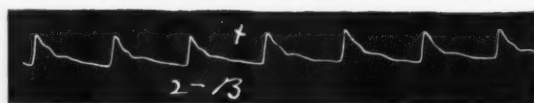
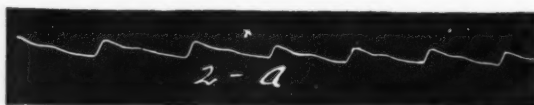
The following tracings were made on patients before and after the use of Abbott's preparation of cactus, known as "cactin." I had never used this preparation of cactus until I read the attack upon it in the *J. A. M. A.* I use the word "attack" advisedly, for the article referred to appeared to me more like an attack than a plain, unpreju-

diced statement of the results of pharmacological experiments with the drug. I therefore decided to test this preparation clinically; it had been tested on healthy animals and was found [See Hatcher's report] to be practically inert, but I wished to know whether it had any effect upon a functionally disordered human heart, as I knew perfectly well other preparations of cactus I had used did have. The following brief reports and sphygmograms speak for themselves.

Case 1. No. 1-A is a sphygmographic tracing in the case of Miss T. who was suffering from grip, complicated with otitis media. She was much debilitated, heart action feeble, but with no organic lesion.

1-B, was a tracing taken from the same patient one-half hour after she had taken one granule of cactin, gr. 1-67.

The cactin I employed in this and other cases reported I personally purchased in the open market. In each case I administered



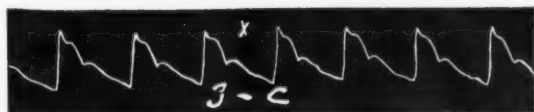
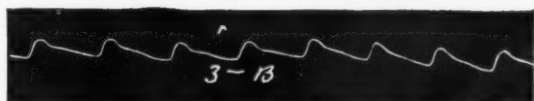
the drug myself, and personally took the tracings.

Case No. 2, Mr. X., 35 years old, a neurasthenic, convalescing from grip.

2-A was taken before any cardiant was administered. 2-B was taken one-half hour after he had taken two granules of cactin, 1-67 grain, and 2-C is a tracing taken one-

half hour later after taking three more granules.

Case 3. Mr. T. U., age 66, "tobacco heart" and moderate degree only of arteriosclerosis. 3-A, tracing before the ad-



ministration of any medicine. He was then given two granules of cactin, 1-67 grain each, and a half hour later tracing 3-B was taken. Two more granules of cactin, same dose, were now given and a half hour later tracing 3-C was taken.

The improvement in the character of the pulse and respiration might have been due to the "hot air" I was giving him, but I doubt it.

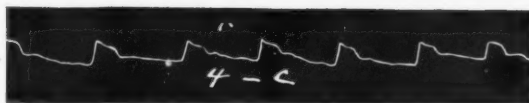
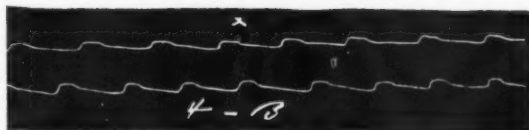
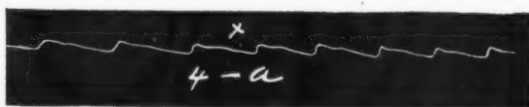
Case 4. This was the case of a young lady who, save being slightly anemic and nervous, was in fairly good condition, able to attend to her daily duties as clerk.

The first tracing, 4-A was taken previous to the administration of any drug. She was then given two cactin granules, gr. 1-67 each, and a half hour later tracing 4-B was taken. This tracing shows about the same character of pulse as the first, with possibly some improvement, but to demonstrate that there was no error I made a second tracing on same sheet of paper, showing practically the same results. I then gave her two more granules of cactin,

gr. 1-67 each, and half an hour later took the tracing 4-C.

Being interested to see what effect the drug would have on my own pulse when I was smoking steadily I chewed up four granules of cactin, gr. 1-67 each, and in one-half hour took another tracing. Meanwhile I continued to smoke steadily and, indeed, previous to taking the drug I had smoked almost incessantly for nearly three hours. 5-A shows the first tracing; 5-B shows the second tracing one-half hour after taking the four cactin granules. Save a slightly increased arterial tension due probably to my age and habits, I believe my heart and circulatory apparatus are in pretty good shape, yet even this nearly normal pulse was unmistakably influenced by the four granules of cactin.

Just how cactus acts to improve the condition of the heart and pulse in certain states, I do not know. But that it does do

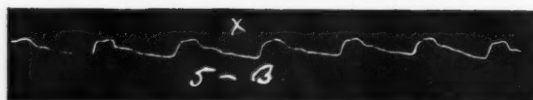
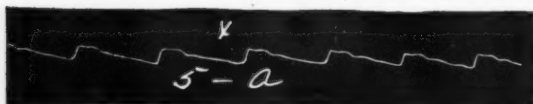


good in many conditions, and that its good effects are usually apparent in from one-half to two hours after the ingestion of the drug I do know, and no man can convince me to the contrary.

I regret that I am unable to show more tracings, especially some from cases of myocarditis, but the ones I submit are

sufficient, perhaps, to convince any fair-minded, unprejudiced physician that we have in cactus something more "substantial than air."

The eclectics and homeopaths are unanimous in their praise of cactus; not only these, but thousands of members of the regular school, besides those I have quoted in this paper, believe that we have in cactus a valuable cardiac remedy. Is it reasonable to



suppose that all these physicians are fools and have been "leaning upon nothing more substantial than air" when they have employed cactus?

I desire to call attention to the following significant facts: The clinical experience of the regular physicians, as well as that of the homeopathic and eclectic physicians, coincide with remarkable unanimity as to the exact place of cactus. All agree that it does not replace digitalis or strychnine; in fact, beginning with Rubini, it will be seen that he compared the action of cactus with that of aconite rather than with that of digitalis, and in this he has been followed by the whole line of clinicians down to the present time. I have selected a number of reports from the clinical field, confining these to physicians of the regular school, and I ask that these observations in the sick-room be given due credence. Prof. Hatcher is asking much when he requires us to believe that the relief following the use of cactus in tobacco-heart, the peculiar heart-action of the neurasthenic, in angina pectoris, exophthalmos, and Raynaud's disease was wholly imaginary, based solely on "hot air". It is much easier to doubt Prof. Hatcher.

In his investigations Hatcher seemed to see but one possibility in regard to the action

of cactus, that is, as a substitute for digitalis and strychnine, which it decidedly is not. From the time when Rubini called attention to the value of cactus in heart diseases, the entire line of clinical observers, regular, homeopathic and eclectic, concur in asserting that cactus does *not* substitute digitalis and strychnine, but that it is of use in conditions in which the other agents mentioned are more or less contraindicated. This, however, Hatcher sees best to ignore. His experiments were performed upon animals, presumably in a state of health. Finding that cactus does not "substitute digitalis and strychnine," he does not content himself with a statement of that fact, but goes on to say that cactus is therefore "inert." A study of his work fails to show

any adequate demonstration of this assertion. I would suggest that his experiments might be paralleled by the following:

Some Suggested "Experiments"

Experiment 1. We have administered water to dogs, cats, frogs, guinea-pigs and rabbits; none of these animals being at that time thirsty; and find that water failed in every instance to assuage thirst. Therefore, water has no power of assuaging thirst.

Experiment 2. We have administered quinine in antiperiodic doses to dogs, cats, rabbits, frogs and guinea-pigs, they being in a condition of perfect health; and in no instance have we found that the quinine in these experiments acted as an antiperiodic. Therefore, quinine is not an antiperiodic.

Experiment 3. We have administered acetanilid in full doses to dogs, cats, rabbits, frogs and guinea-pigs, they being in a condition of perfect health; and in no instance was there a reduction of temperature. Therefore, acetanilid possesses no antipyretic action.

It is an exceedingly interesting question, whether certain drugs, or any drugs, possess remedial powers when administered in disease although no special action is demonstrable from these drugs when administered

in a condition of health. The latter does not by any means exclude the possibility of the former.

Moreover, we have, I trust, advanced far beyond the point at which we can say that if a drug has no evident effect on circulation, respiration or temperature, it is therefore inert. There are other functions of the human body upon which drugs may exert their influences. They may not show any evident effect upon temperature, circulation or respiration when administered in a state of health, nevertheless they may have a marked effect upon some one or other of the internal secretions or they may occasion evident and uniform alterations upon the composition of the urine or other excretions, and unless observations upon these points are made, we have no right to say that any drug is inert, because it has not affected the functions mentioned.

Nobody can study modern human physiology without realizing the necessity of a restudy of our entire materia medica in the light of our lately acquired knowledge. The physiologic experiments which were made twenty or thirty years ago no longer suffice. We have outgrown them.

Relative Value of Animal-Experiments and Clinical Use

Experiments upon animals have only a relative value, as applied to the use of the same agent in the treatment of the diseased human. Not a solitary fact can be predicated as to the action of a drug upon a sick human being from its action upon any healthy animal whatsoever. The utmost that can be obtained from experiments upon healthy animals is an indication pointing to the direction in which experiments may be made in the clinical field of human medicine. It would be preposterous to take the laboratory studies of animals and transfer them unchanged to the clinical field. Were we to do this, we should conclude that morphine in doses of 1-2 grain per kilogram is "inert," and that arsenic is a somewhat effective but harmless cathartic.

Making all due allowances for the uncertainty of clinical observations and of de-

ductions therefrom, we must still insist that there is a value to be placed upon such observations and deductions; and that it is only the laboratory workers, who know nothing whatever practically of clinical work, who insist upon ignoring evidence from this source. We as clinicians look upon ourselves as a court of last resort, for the final tests, without which no deduction from laboratory experiment is conclusive or can be conclusive.

Cushny says: "The drugs that often pass as cardiac stimulants differ much, not in their effects on the body in general, but in their action on the heart, and opinions may differ as to whether some of them stimulate or depress the heart. They certainly cannot be substituted for each other in the treatment of heart disease, as is suggested by their being classified together. Finally, practical therapeutics can be taught only in the clinic and in the teaching of pharmacology, and it seems advisable to direct the pupil's attention rather to the action of drugs than to the practical uses, which can be taught to much greater advantage in connection with the symptoms, diagnosis and other clinical treatments of disease."

And yet there are certain specialists in pharmacology, men who are not engaged in the practice of medicine at all, who have dared to assert that cactus is worthless as a remedy, despite the experience of thousands of able physicians who have found cactus of value, and they have even gone so far as to ridicule the men who employ it and impugn the honesty of certain well-known manufacturers of cactus preparations.

A Suggestion to "Authorities"

To these so-called authorities whose *ipse dixit* we ordinary, every-day, practising physicians are not supposed to question, I would refer the grand sentence of Swedenborg: "It is no proof of a man's understanding to be able to affirm whatever he pleases; but to be able to discern that what is true is true, and that what is false is false, that is the mark and character of intelligence."

These learned and studious theoretical specialists have no monopoly of wisdom. Their violence of direction in some degree disqualifies them to think truly. We owe very many valuable observations to the practising physicians, men who are not very acute or profound perhaps, but men, nevertheless, who in the school of experience have learned to distinguish between a potent remedy and "air."

With all respect for the knowledge and ability of the academic pharmacological specialists, they should be reminded that their true position is in the witness-box and not on the judicial bench. Their evidence may form one phase of the material, an important part even of the material, for a decision, but yet the decision is not intrusted to them. It is the clinician who must decide. Common sense, freedom from bias, bedside experience, a judicial spirit and experience of men's motives and actions and many other elements come into the decision.

Now, as practising physicians it is important that this should be kept in mind. It does not speak well for our steadiness and

common sense that we should so frequently accept extreme conclusions on little more than the *ipse dixit* of specialists in pharmacology. The very fact of their being specialists, it must be remembered, tends to a certain narrowness and partisanship and overbelief in the powers of their critical faculty.

As for me, fully ten years's experience in the use of cactus has convinced me that the drug has distinct value as a cardiant and I shall continue to use it undisturbed by any ridicule or attack upon it.

Those physicians who have used cactus and have found it of value will doubtless continue to use it, and those who have not used it I would advise that they try it in proper cases.

[Cactus (cactin—the concentration of its active principles) either is or is not of therapeutic value. You are competent to judge. If you care to test for yourself, I will see that a working sample is sent you, you to report, *pro* or *con* as you find it, to this, or any other *fair* medical publication. ¶ Let's settle this question.—Ed.]

STORY OF AN OLD-SCHOOL PHYSICIAN

Being a tribute to the life-work and professional activities of a revered member of our profession. Read before the Dover Medical Society, Dover, New Hampshire, June 3, 1908

By A. NOEL SMITH, M. D., Dover, New Hampshire

I CANNOT even hope, much less expect, to present or portray to you the many and strong parts of the old country doctor in so eloquent a manner as the late Ian McLaren in his "Beside the Bonnie Briar Bush," with Dr. McClure the central figure, or as Dr. King, in his "Stories of a Country Doctor," have done.

I shall make no attempt, whatever, to vie with the writings of fact or fiction concerning the country doctor; but I will content myself, and, I trust, better please you, with the presentation of a simple, un-

adorned biography of the typical physician of the last century.

Oftentimes a retrospect yields one more of interest, if not of profit, than a consideration of the present or a look into the future can possibly give.

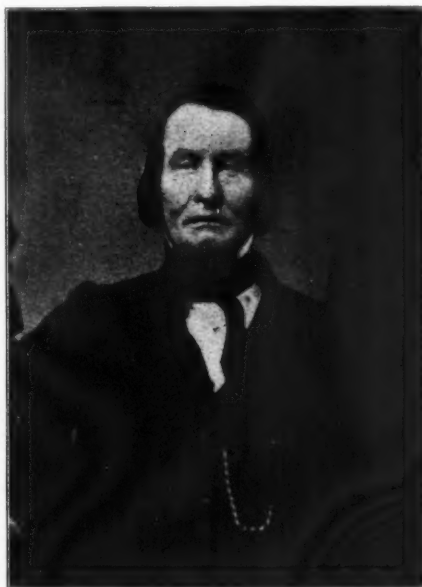
I shall endeavor to put into my word-picture, upon this occasion, a true representation of the growth and experience of the medical man of the first half of the last century. And please to bear constantly in mind that the individuality* around whom my

*The writer's father, Samuel M. Smith, M. D.

thoughts shall cluster had more than one contemporary.

Back to a New England Hamlet

Go with me in your imagination to a humble farmer-blacksmith's home in a New England hamlet and note the birth-place of the subject of my sketch. His early environment was not of the best. He was the seventh of a family of ten children, the father of whom maintained the assertion



DR. SAMUEL M. SMITH

that what was good enough for him was good enough for his offspring. This son was full of ambition, which his mother both shared and promoted. Thus encouraged by her, he was not to be thwarted by his father's lack of interest, and he determined to secure, at all hazards, an education.

We find him at an early age writing the following sentiment upon the birch bark of the forest: "Being born in a free and independent nation, I have imbibed into my breast the principles of freedom, and I will never suffer myself to be duped by any fellow-being, thinking that one has no right to trample on another."

The village doctor warmed to him, helped him with the loan of books, with his mature advice, etc., and, later on, had him "ride with him" as a student of medicine. No work was too menial, nor pay too small, as he struggled for the means to reach the desired end. With his first earnings, at the early age of twelve years, he purchased a tea-set for his mother. Arrived at manhood's estate, we find him in the hay-field at seventy-five cents a day, holding the plow, picking apples, hauling wood and fencing-stuff, hauling manure, hoeing, harvesting corn, chopping wood—all at fifty cents a day. Betimes he becomes "brisk wielder of the birch and rule" for the munificent (?) salary of ten dollars a month: "and all the droll experience found at strangers' hearths in boarding round."

Struggles to Secure an Education

Upon one occasion he walked from his home in Maine to Boston to secure work. "I took up my board," he says, "with a man by the name of Moore, in Hanover street, for one week, and paid for one week's board in advance, which was three dollars. Tuesday I looked around and inquired for a place, but with no success. Wednesday I looked around as on the preceding day, with the same ill luck. Thursday is Fast Day in the State of Massachusetts. I do not expect to do much here today." He doubtless secured work.

In the course of time, by infinite scrimping and saving, he reached a medical school, was graduated from the same with not a cent in his pocket, and walked sixty miles to his home. We find him reading and defending (as was the custom in those days) a thesis at graduation upon the "Modus Operandi of Medicines." A brief synopsis will indicate in a slight degree the trend of medical thought at the time.

He held that the organic animal machine is composed of two portions, the solids and the fluids, with their subdivisions. He compared the parts of the human system to a chain or ring, in their connection. "We may begin at any one organ, observing its dependencies, and then pass to the next, and

thus continue until we arrive at the one from which we set out, and complete an uninterrupted circle."

Theories of Medicinal Action

He deduced therefrom that if one organ is affected with any agent, another and another is implicated, until the whole system is involved. He alluded to two theories upon the action of medicines. One was that "they act primarily on the solids, the impression being conveyed through the system by sympathy; the other, that they are absorbed, and act on the organs of the body through the medium of the blood." The sympathetic relations between organs he considered incontrovertible, and he also held that "many remedial agents are absorbed, passing unchanged into the circulation, and acting on the various organs through the medium of the blood."

After quite lengthy arguments, and several quotations of authorities upon remedial agents as they act after entering the circulation, he maintained that the theory of sympathy cannot explain "how sulphur reaches the skin when taken into the stomach in small doses; or how we get the odor of garlic or onions in the patient's breath after they have been applied to the soles of the feet."

He goes on to show that each article in the materia medica has its own peculiar effects when taken into the system. "But by what law, we know not, any more than we do of that power by which the heavenly bodies are preserved in their relative situations." He maintained that every article in the materia medica exerts its peculiar influence in the system on one and the same general principle, that of stimulation. As examples, he cites alcohol, opium, etc., and even blood-letting. "For, in inflammatory affections the antiphlogistic course of treatment has always been resorted to, and what do we administer? Certainly the most diffusible stimulants we possess. But we do not bleed to reduce the system? No, this is not our intention. Blood-letting, so far from being a debilitant, is by far the most diffusible stimulant we can employ

in these affections. The fluids are increased in quantity and vitiated in quality. When the system is oppressed with a very large disproportion of fluids, we draw blood, thus relieving the overpowered organs. What more diffusive stimulant than this, the use of the lancet? Its efforts are felt by every organ and tissue in the whole animal economy. When a person is fully overpowered by ardent energies, we know that the animal powers are so far enfeebled (at least, many of them) as to be suspended



DR. A. NOEL SMITH

in their functions. Now, if we bleed him, he is immediately resuscitated, and awakes as from the dead. Now, what can this be but stimulation? Thus it appears—that what so frequently is termed the depleting plan, is, in reality, a stimulating one.

"Our deductions, then, are that one general law pervades the medicinal kingdom, that of stimulation; that the action of medicines is modified by the peculiarity of the article selected, by the peculiar struc-

ture to which the remedy is directed, and by the condition of the system at the time."

The Plunge into Active Practice

¶ The next thing in order was the plunge into active practice; and, to secure a field, he chose to traverse the primeval forest of Maine on horseback, with other pioneers. No greater hardships ever came to Western emigrants than those which were the lot of these Eastern pioneers, while the doctor was the leading spirit among them. Here they built new homes for themselves and their families. The doctor not only erected his own residence, but, in the course of time, he built a church with his private funds, and gave the town its name. And, today, Meddybemps, with its lake seven miles long and three miles wide, containing fifty-two islands, is a noted summer resort. It was here that Joe Jefferson, the famous actor, entertained Ex-President Cleveland during the summer of 1903, and the Camp is now owned by the son, Charles Jefferson.

Throughout his entire professional life he was a leader, and he was active in every movement, whether religious, political or moral. Perhaps, from our present viewpoint, he might have been too radical, but I firmly believe that those pioneer radicals in our profession a generation or two ago paved the way for the great light and freedom which are ours today.

Most of the work in the earlier part of his professional career was done on horseback, with the time-honored saddle-bags slung over the horn of the saddle; and, more than once, after night-fall, did his horse's hoofs mark time to the howls of the wolves that harried his homeward gallop. Thus through winter's cold, through summer's heat, and through the mud of spring he traversed the rough, newly-made roads of the more than half-dozen townships whose inhabitants neither knew nor desired other practitioners. Like McLaren's Dr. McClure, he was their "chest doctor, and doctor for every other organ as well; he was accoucheur and surgeon; he was oculist and aurist; he was dentist and chloroformist, besides being chemist and druggist."

His surgery, viewed in the light of today, was crude; but he was quite successful, and enjoyed and merited quite a local reputation as a surgeon. It was often his wont to have patients brought to his own home, to operate upon them there, and then to care for them personally. Thus he was nurse as well as surgeon. After operations he left flaps open to glaze over from contact with the air before being closed by sutures, regardless of the danger from the bacteria of the atmosphere. For this was before the days of Pasteur and Lister, when surgeons rejoiced to see the so-called "laudable pus."

He was a country physician, pure and simple. Indeed a very large proportion of the doctors in those times were country doctors, as the large, numerous, and populous cities of our day were then unbuild. These country doctors, then as now, might not have been so polished as their city brothers; but they were more resourceful, as their battles, successful or otherwise, had to be fought alone. Such men are not always reckoned at their full value. One writer appreciates them when he says: "And so let us drink to the health of the good old-fashioned doctor. May every hair of his head be a candle to light his steps to glory, and may God bless him—lest we forget."

And again:

"He's going all night and he's going all day,
The old country doctor who won't stop to play;
He's tended the families, from grandfather down,
So long that he's really a part of the town.
At birth and at burying, gentle and just,
Through storm of the winter, through dew and
through dust,
In all kinds of weather, at all sorts of hours,
He comes like a breath of the healing of flowers!
Ah, tender old doctor—heart's love unto you
As you ride down the roads when the violets are
blue,
Or when the bells jingle across the hard snow—
Heart's love to you when and wherever you go!
For none are more faithful, more conscious, more
wise,
With such laugh in their voice, and such gleam
in their eyes,
Such magic to touch the heart's fountain of tears,
Old friend of the neighborhood through the long
years."

As Dr. Norman well puts it: "When we cease to worship the city physician as a

human god, because he is from the city, and cease to regard the country physician as a fool, because he is from the country, we shall be in a fair way toward a more perfect organization."

Busy in His Profession to the Last

I will not itemize farther this country doctor's career, which was ever characterized by a fixed determination to perform well every present duty. This characteristic was in no degree lessened, nor his iron will broken, as his last hours drew near. Assisted by members of his family, and bolstered up on what proved to be his death-bed, he reduced, and applied splints and bandages to, a fractured humerus.

Thus, at the comparatively early age of fifty-six years, a very busy life ceased to be, while it would seem that he accomplished

more in his professional career of thirty-three years than most men could do in half a century. His moments were filled with action from the dawn of the day when the "shadows were hurrying westward, till they fled around the earth and were hastening out of the east."

I am sure that too much of praise cannot be accorded to the unselfish practician of medicine, in any and every age. All honor to the dauntless soldier in whose eyes a retreat is a shameful flight. Let our admiration go forth to the faithful clergy who often administer the last sad rites in the midst of infection and contagion; but there are none braver, there are none more faithful, than the true physician, whether old-school or new-school, who in city and country battle daily and hourly, face to the foe, against pestilence and death.

SUMMER DIARRHEA AND ITS TREATMENT

Different forms of diarrhea, the conditions that cause them and simple common-sense methods of treatment; including a few remarks on cholera infantum

By W. C. ABBOTT, M. D., Chicago, Illinois

DIARRHEA is not a disease, but a symptom. It is characterized by a simple looseness of the bowels, causing more or less weakness. Ordinarily it will yield promptly to proper treatment. Continuous, watery stools very rapidly exhaust the tissues, and if this condition is unchecked it may result fatally in a few hours.

Diarrhea usually occurs during the warm weather of the summer months. It is more common among infants and young children. Owing to the fact that the growing child not only has to maintain the current nutrition of the body but has also to provide material for growth and development, its organs are kept hard at work. If for any reason its nutrition becomes impaired from errors in diet, the digestive functions are deranged, with consequent impairment of the blood. If, added to this, there is an exces-

sive drain upon the bowels, the exhaustion becomes profound, often with disastrous consequences.

The Causes of Diarrhea

The principal cause of diarrhea is errors in diet—either an excess or a bad quality of food. Other causes are changes in the biliary secretions, vasomotor troubles, emotional, nervous and inflammatory disturbances. Diarrhea may also be caused by passive congestion of the intestinal tract and by the irritation caused by foreign substances, by bacteria and their products, etc., by poisons developed in food and within the body as a result of depraved metabolism, also by exaggerated muscular contractility and from intestinal paralysis.

The symptoms of these various forms of diarrhea are too familiar to require extensive

comment. The treatment, however, has been in the past such a routine method that it seems to be advisable to suggest a method which in my hands has proven more efficient than that heretofore recommended in the various textbooks.

Treatment of Simple Diarrhea

Simple diarrhea, due to excess of food, is usually cured by total abstinence for a day or two and thorough cleansing of the alimentary canal. If the disease is a so-called "diarrhea dyspeptica" the diarrhea in itself is a curative effort and should not be checked by constipating medicines. On the contrary, thorough cleansing of the intestinal canal and the administration of some simple digestive will usually effect a cure. Either the saline laxative or some preparation of rhubarb (rhein), or better still, juglans (preferably given as juglandin) will regulate the intestinal functions and cause evacuation of any undigested material which the intestines may contain, thus leaving the bowel in a normal condition. Usually it is well to precede or associate these remedies with calomel in 1-6 grain doses, and they should always be followed by the sulphocarbolates, as in the well-known "intestinal antiseptics" formula. If there is acidity the "neutral cordial" combination of sodium carbonate, sodium sulphocarbolate, emetine, hydrastin and rhein seems to neutralize it and restore tone to the bowel.

Sometimes a diarrhea is produced by an excess of bile. Here the cholagoges, or drugs which increase the secretions of bile or hasten its expulsion from the intestines, are indicated. Of these calomel, euonymin, iridin, podophyllin and rhein are the most efficient. Saline laxative is of great value here also.

A very common cause of diarrhea is vasomotor paralysis; exposure to cold, fright or any emotion may be enough to excite it. Many varieties of congestion and inflammation are due to these nervous influences. In cases of simple paralysis of the nerves brucine in small doses or strychnine arsenate, gr. 1-67 every two hours, will be found very beneficial. Should inflammation be added to the vasomotor troubles and fever be pres-

ent, aconitine or the defervescent compound should be administered. If pain is pronounced and severe, small doses of morphine may be given with perfect safety. The diarrhea will be checked much more quickly if these two varieties of agents are combined. Such combinations as the "chlorodyne" granules or the "zinc and codeine" are excellent in colicky diarrhea.

Diarrhea Due to Passive Congestion

Should diarrhea be caused by passive congestion the treatment is not usually so easy on account of the permanency of the cause, but here much can be done with saline laxatives to relieve the engorged mucous membrane and excite a serous discharge. Vasoconstrictor conditions may be relieved by frequently repeated applications of alcohol baths, mustard to the feet, or some counter-irritant over the abdomen. It should be remembered that the intestinal mucous membrane is a very active eliminative organ and often suffers because this eliminative function is exaggerated or perverted by reason of the nature of the substances which it is compelled to excrete. It is in this way that many infectious diseases, such as malaria, produce diarrhea.

Often food, instead of being properly digested, decomposes (especially animal foods) with absorption of toxins through the intestinal mucous membrane. In these cases the stimulation of free elimination by small doses of calomel, and a saline laxative (effervescent magnesium sulphate) followed by the sulphocarbolates for their antiseptic effect, will usually suffice to control the malady.

The deterioration of the constituents of the blood, which gives rise to the various diatheses, is also the source of a similar toxic product, which by irritating the mucous membrane of the intestinal canal excites diarrhea. In all these cases we should give the saline cathartics to facilitate intestinal and renal elimination and aid in restricting the secretions to their normal conditions. The diatheses itself should be met by appropriate remedies such as quinine, strychnine, sodium benzoate, etc.

A very frequent cause of diarrhea is excessive peristaltic action, as a result of which the food is propelled through the intestines rapidly, before it has time to be digested, thus irritating the mucous membrane and causing excessive bowel movement. For such cases one granule of hyoscyamine or atropine every three hours (always "to effect") may produce a cure after other means have failed, by regulating the contractile power.

When the disease assumes the form of cholera infantum, there is call for immediate and heroic treatment. The entire intestinal tract should be emptied of irritant matter at once; the lower bowel should be cleaned out with normal-salt solution, using a soft-rubber catheter as a colon-tube and leaving a little of the solution to make good the enormous drainage of fluid from the body. If anything can be retained on the stomach give a number of doses of calomel and aromatics, gr. 1-10 each, at half-hour intervals, following with the saline laxative lemonade. Follow this with the intestinal antiseptics, the sulphocarbolates, and keep them up, using these salts also by enema. When the sulphocarbolates can not be retained try minute doses of copper arsenite.

The best single remedy in cholera infantum is hyoscyamine, or atropine when the stomach can retain nothing. It may be given hypodermically in doses of gr. 1-1500 to 1-500, repeating often enough to get the phy-

siologic effect. Unquestionably in these cases morphine is one of the best remedies to use, and if we employ the dosimetric system we need not fear to administer this drug even to children, but always use it very cautiously. Should the child become sleepy before the diarrhea has been checked we may give a granule of brucine, or strychnine arsenate in small doses, every three hours, discontinuing the morphine. A better sedative than morphine in most cases is Waugh's "anodyne for infants."

Diarrhea of nursing children is almost always dependent upon improper food, and by regulating the diet, often by withholding feeding entirely for twenty-four hours or more, and by improving the hygienic surroundings in every way possible, cleaning out the intestines of any decomposed or irritating substances, the condition will be greatly improved, usually without further treatment.

It is unwise in these cases to give astringents. They act in two ways, first, by coagulating the albumin of the intestinal contents, causing them to be more easily retained in the system, and second, by causing a contraction of the tissue which unfavorably affects the nervous centers. Sometimes it seems necessary to give an astringent, and the chloride of iron seems to act as well as anything. Whenever opium is indicated the morphine should only be administered by the dosimetric method.

THE WOMEN WHO FOUGHT FOR THEIR COUNTRY

This article is the response of a toast given at the annual banquet of the War Nurses' Association of the Spanish-American War, June 6, 1908

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Professor of the Surgical Diseases of the Genitourinary Tract, Medical Department of the University of Illinois

THE formation of the Association of Spanish-American War Nurses marked an epoch in American military history. The long struggle of the trained nurse to obtain governmental recognition was by no means over. Our country

has a bad memory. It was necessary that the noble women who served the country during the Spanish War should form an organization and have yearly reunions—lest we forget! The tender hand and sweet voice of woman long ago did a large part in

mitigating the horrors of war. The bloody records of the Crimea were humanized by that uncanonized saint, Florence Nightingale—and the world almost forgot what it owed to women nurses in general, while idolizing Miss Nightingale in particular. Hundreds of noble women battled for the lives of our sick and wounded soldiers in that more barbaric and bloodier strife of brother against brother, the Great Civil War—and we quite forgot.

*The Old Gone; the New Here—but We
Forgot!*

And who shall challenge this statement in the face of the attitude of our government toward the female nurse at the outbreak of the Spanish-American War? Medical science—the experience of countless thousands of sick and wounded in our civil hospitals and private homes—had put the trained nurse on a plane of usefulness but little below that of the skilled physician himself. The Sairey Gamps of the old regime had disappeared; they had gone to the land where “born nurses” cease from troubling; they had sought their level in the spirit-world, and were frying griddle cakes on golden skillets in that bourne where the invalid is at rest and the pills and knives of the doctor are no more. The places of the old-time female terror of the doctor and peril of the sick had been taken by the refined, up-to-date, trained nurse. Thousands of the noble sisterhood were awaiting their country’s call.

But Uncle Sam was sleeping. He had failed to progress in all other matters pertaining to the conduct of war, and how could we expect him to be so modern as to adopt up-to-date methods of management of sick and wounded soldiers? At the head of the army medical department were plenty of old ladies of a prehistoric fossiliferous age, masquerading in garb masculine, and why should Uncle Sam allow young, capable, real women to “butt in?”

Like most of the medical innocents who went into the Volunteer Service from Civil Life, I fancied that the care of the sick was the principal role of the Army Surgeon, and naturally supposed that the Government

would want trained nurses, and plenty of them. I therefore enthusiastically cooperated with that noble woman and best of patriots, Mrs. George M. Moulton, my Colonel’s wife, in organizing a corps of trained nurses for service in the Spanish War. Words would not express our disappointment and disgust with the powers that be when our proffer of nurses was respectfully but emphatically declined.

A Record of Personal Experience

And now I am going to relate some personal experiences: First, to show how really intelligent the medical management of the war was, and second, to demonstrate the need for the trained nurse in war:

The hospital corps in the Second Regiment, Illinois Volunteers, was the apple of my eye. Being a professor in the Medical Department of the State University of Illinois, I had an excellent opportunity to select men for the service. Out of some three hundred applicants I selected twenty-six men, comprising doctors, pharmacists and senior students of medicine. Just before mustering in at Springfield came an order directing the members of the hospital corps to enlist in the company ranks. As the men had entered the service to care for the sick and I could not guarantee them that they would not be compelled to tote a musket, they rebelled, and seventeen of them packed their kits and returned home.

I at once organized another corps around the nucleus of the remaining faithful nine from such materials as the companies offered. Several weeks later, at Camp Cuba Libre, came another telegram from Washington commanding all members of the hospital corps to enlist for three years in the regular army. And then there was more trouble and more desertions, leaving only ten of the new corps to build upon.

Remember, please, that the hospital corps was to do the nursing, and that the rank and file of the Second Illinois, from which the final hospital organization was formed, was composed mainly of horny-handed sons of toil who could run engines and construct machinery with the best of them, but were

hardly to the manner born in the matter of nursing.

And then came the worst calamity that ever befell a hospital—a chief surgeon of the regular army, whose creed was: (1) "I am the whole cheese, and have more changes of uniform than anybody in the service."

(2) A good nurse should clean and drive the ambulance mules in the morning and take care of typhoid cases in the afternoon. "It makes him versatile," he said.

I ordered an ice-cap for a meningitis-case one morning. When I made my evening rounds, I found the bag full of warm water. On demanding an explanation, the anti-meridian masculine chambermaid of the Mulery said: "The feller that I relieved didn't say nuttin' bout puttin' in no ice"—a statement which was as deadly in import as it was true and illiterate.

But good times came: The trained nurse received recognition. The government finally yielded to the pressure of public opinion, and the old women at Washington submitted with martyr-like resignation. But it was too late to save the dozens of lives that had been uselessly sacrificed to ignorance and incompetency—too late to soothe the agonies of the martyred soldiers who had gone.

What a record the nurses made when once they got their innings! The number of lives saved through their instrumentation would be impossible of computation. Still less could we compute the suffering that was assuaged by their tender ministrations.

Ladies and gentlemen, fighting for one's country is not all in the exchange of shots on the firing line: In the Crimean War there were six deaths from disease to one from blade and bullet; in the Franco-Prussian and in our own Civil War the proportion was the same. In the Spanish-American War the percentage was not reduced. In the war in the Philippines the proportion was fourteen to one. Think of it! Think of the importance of the medical service in guarding our country against the economic loss incidental to the death or crippling of able-bodied men. Think of the enormous cost of our pension list. And, having considered these things, tell me whether I am wrong in paying this my

tribute of respect to the noble women who stood between the soldier and death of disability; who stood between the national treasury and stupendous financial loss—the women who fought for their country.

The Trained Nurse Here to Stay

The trained nurse has come to stay. She is the handmaid of modern medical science. She is indispensable to the conscientious physician and relieves him of a larger part of his labor and responsibility. She is the ablest of lieutenants in the battle with disease and wounds. What she is in civil life, she is in military service in time of war—and more; she is the only effective antidote for that worst of complications of the ills of the soldier, homesickness. She is the only tender, humanizing influence that brings the suffering soldier near to the dear ones whom he left behind. The government that does not in future give her full meed of recognition, that does not avail itself of her skilful and faithful service in time of war, stamps itself as barbaric, inhumane and unintelligent.

A single case in war of death or suffering without proper nursing, save where it is impracticable to obtain the services of the trained nurse, is a shameful reproach to the country that is responsible for it. To me the spectacle of the army surgeon fighting for the lives of sick and wounded soldiers without the aid of skilled nursing is most pathetic and discouraging. When the skilled physician and the trained nurse battle shoulder to shoulder against disease and death at the bedside of the stricken soldier the poor fellow gets most of the advantages that modern science has to offer. What a consolation it is to the dear ones at home to know that the suffering loved one is soothed and sustained, cheered and stimulated in his fight for life and limb by the tender care and gentle hand of woman—above all by the skill and knowledge of the trained nurse.

History gives fame and glory to the killers of their fellow man, the nation binds the laurel wreath upon the brows of its great generals, but when men's eyes are opened, as one day they will be, the glory of the profession of killing will be dimmed to nothing—

ness before the bays with which the trained army-nurse will be crowned by a grateful people. Quietly, uncomplainingly she fights for her country. A place in the Hall of Fame is not yet for her; not for her are the glitter of gilt buttons, the prestige and honor of shoulder-straps and the plaudits of the mob. And still she fights on and on until the fight is won and the soldier's life is saved, or, fate opposing, till the grim boatman has called for yet another passenger for the dark, mysterious void, and she knows that the fight is lost and her efforts in vain. ■

Ladies and gentlemen, the most precious gems that my eyes have ever seen were the tears that I once saw shed by a nurse at the bedside of a dying soldier. Never was blow struck or shot fired in war, never was bullet or shell molded, that was half so potential in patriotism as were those tears. When the divine essence of human kindness that pervaded the being of that noble woman shall have percolated through the dense hides and softened the hard hearts of politicians and

rulers, war will be no more, and the woman who fights for her country will do battle with disease and death only in more peaceful and more legitimate fields. But so long as nations are the arch-anarchists of the earth, and subservient to no law but that of might; so long as the barbarian in man is so near the surface; so long as throat cutting is the final test of the justice of an international cause, just so long must woman forget the savage brute that lies concealed in the best of men and fight for the lives of those who have fallen while themselves trying to maim and destroy their fellow men.

Whether the cause be just or doubtful, matters not to her; whether her patient be noble or degraded, a valuable member of the brotherhood of man or one of the "better dead," is naught to her. She fights under a flag that is higher, grander and more beautiful than his. Purer and nobler than any patriotism is the motive that inspires the woman who fights, not alone for her country, but for humanity.

TREATMENT OF GASTROENTERITIS IN INFANCY

How disease of this type may be prevented by the application of intelligent hygienic methods and how it may be cured by the use of common-sense therapeutic measures

By HORACE R. POWELL, M. D., Poughkeepsie, New York

THE mortality in this condition can be materially lessened by modern methods of treatment based upon the existence of toxins in the gastrointestinal canal. This result is best secured by:

1. Attention to the diet.

2. In so far as it is possible, cleaning out, cleaning up and keeping aseptic the gastrointestinal canal by the use of anti-septics of a lightly astringent character.

3. Systematic bathing to reduce abnormal temperature, add to comfort, and to assist elimination.

4. "Taking up the slack" and restoring the mucosa to a normal condition.

During the heated term the diet of children, especially the artificially fed, has a tendency to produce a laxative condition, but when the character and frequency of the stools give evidence of putrefactive changes, we have a condition to be met promptly with active treatment.

Prophylaxis frequently contemplates change of environment both in acute and chronic cases.

The greatest attention should be paid to cleanliness of the streets in thickly populated communities, and to the milk- and water-supplies, in all cases. The home-surroundings should be the best

obtainable, and children should spend a good share of the day in the open air.

Soiled napkins should be immediately washed and disinfected. Weaning should not be resorted to during the heated term unless the milk of the mother becomes changed in quality or totally insufficient in quantity; in which cases, whenever practicable, a wetnurse should be provided.

Those prone to diarrheal troubles should be kept quiet. The skin should be frequently and thoroughly bathed, while the dress should, so far as possible, consist of a single garment of light flannel or linen in order to provide against sudden cooling of the skin. Flannel is usually recommended, but I prefer light linen mesh.

When the diarrhea is mild and constitutional symptoms are absent, proper attention to hygiene, a restricted diet, and the administration of castor oil, or small doses of calomel frequently repeated and followed by a saline laxative, will usually produce good results. If not, the subsequent use of a well-known mixture of salol, paregoric, etc., in the form of an emulsion, is of service.

When called to see an acute case of a moderate degree of severity, the patient should be divested of all unnecessary clothing and placed in a cool, airy room; or if in summer and the weather be pleasant, out of doors under a shade-tree or improvised tent.

On account of the rapid loss of fluids from the body a fairly liberal supply of cool, sterilized water should be supplied, the amount and frequency being determined by the thirst and ability to take it without producing emesis. Besides assisting in equalizing the circulation and quenching the thirst it reduces temperature and acts as a diuretic.

The frequency of bathing should be determined by the temperature, the condition of the skin as to heat and dryness, and the amount of restlessness.

For this purpose I like lukewarm water, slightly acidulated with vinegar (a tablespoonful to two quarts) or the addition of double that amount of alcohol to the purpose of cooling by evaporation.

In every instance for a period, the length of which is to be determined by the condition, all food should be stopped. The cautious use of diluted cool brandy-water or whey may subsequently be begun, extreme care being exercised as to the frequency of administration, vomiting to be considered a danger signal.

The stomach must in all cases be respected. A procedure of importance is that of keeping the mouth as aseptic as possible by frequent cleansing with solutions of boric acid, "glycothymoline" or "listerine." If the head becomes unduly hot, applications of the ice-cap or ice-water to the forehead are indicated.

Should the patient give evidence of prostration, with cold feet, the latter should be sponged with hot mustard water. Proper attention to the head and feet will conduce both to comfort and recovery.

No patient, in any illness, can do well with cold feet or an abnormally hot head.

Cases of any but a moderate degree of severity call for high injections of common salt solution (1 ounce to the gallon) or a mildly alkaline antiseptic solution, the former, providing prostration becomes a prominent symptom, the latter, if the discharges become frequent and offensive.

Should gastric irritability be marked, the stomach should be washed out in the same manner, the lavage to be followed by a mild solution of sulphocarbolate of sodium.

If the symptoms be not those calling for this method of procedure, the use of 1-10 grain of calomel every half hour until about one grain is taken, followed by a saline laxative, will clear the canal of offending material and promote the absorption of nutriment.

In these mild cases the preliminary cleaning out, followed by the use in solution, at one-half to two-hour intervals, of copper arsenite in doses of from 1-3000 to 1-250 grain will bring about rapid improvement.

Dr. Aulde, who popularized this method of treatment, also recommends the use of nuclein throughout the case, from 2 to 10 drops of the solution being placed upon the tongue three or four times daily, or in extreme cases, given hypodermically.

Personally I am a believer in the use of nuclein in all cases of illness attended with an undue degree of prostration. In cases of acute gastroenteritis of a more severe type I prefer just the use of calomel followed by a saline laxative, then the use in cool solution of the triple sulphocarbolates, in grain-doses for a child one year old, every hour or two, till the stools lose their fetor and approach their normal condition as to frequency and color. After that I use them at longer intervals, and finally use calcium lactophosphate for its effect on cell-formation, in this manner rating as a reconstructive. For a child of one year I use about 1-10 grain every three hours.

All solutions should be sweetened with saccharin. In order to "take up the slack," for a child one year of age, I use brucine, 1-2000 grain every three or four hours. This I continue throughout convalescence, alternating with the use of berberine hydrochloride, 1-67 grain, to improve the condition of the mucosa.

If There Are Symptoms of Collapse

Cases presenting symptoms of collapse are best treated with atropine sulphate hypodermically, in dose of 1-800 grain every half to one hour until reaction occurs, then in solution at longer intervals. Whenever the forehead is cold, the skin pale and cool, and prostration is marked, this remedy is indicated. *It is our best remedy for relieving shock from whatever cause.* Even the shock due to hemorrhage is best relieved by hypodermic injections of atropine.

In acute gastroenteritis opium should never be given unless the bowels are cleaned out, and only then if there be no signs of cerebral symptoms or high temperature. Paregoric is the most eligible form, five minims being given to a child of one year, and its effect carefully watched. Copper arsenite frequently relieves pain in almost a magical manner, either alone or combined with Waugh's anodyne for infants, when flatulence is a marked symptom.

By following the directions hereinbefore mentioned but few cases will require defer-
vescents. When such remedies are indi-

cated, however, I make use of a standard granule of amorphous aconitine, gr. 1-134; digitalin (Germanic), gr. 1-67; and strychnine arsenate, gr. 1-134; for a child of one year, dissolving one or two granules in 24 teaspoonfuls of hot water and sweetening with saccharin. Of this solution I give a teaspoonful every one-half to one hour, to effect, then at longer intervals to maintain effect. Given in this manner, and carefully watched, this is a safe defer-
vescent.

Children with acute intestinal troubles should be seen frequently by the physician, in some cases even every two hours.

The question of diet is an extremely important one, as the vital forces may be rapidly destroyed from the influence of pathogenic bacteria, the rapid loss of fluids, and the inability to appropriate sufficient nutriment. Even after the acute symptoms have subsided, the tendency to relapse may be so great as to call for a very cautious return to a sustaining diet.

I do not believe in the use of milk in any form except "lactacid" milk, until the acute symptoms are controlled, and the gastrointestinal canal is put into condition to make a successful fight against the *damnable casein*. The modification of milk has been so perfected as to reduce to a minimum the dangers attendant upon its administration.

Of course the best of all foods for an infant is the milk of a healthy mother, but nearest to it of anything within reach of the masses is cow's milk, which unfortunately is not so easy of digestion.

"Lactacid" milk provides all that is good of cow's milk in a form usually acceptable and digestible, the casein being curdled in very small flakes in a similar manner as to mother's milk. It is antagonistic to pathogenic germs. It can be easily prepared at home in convenient quantities and usually keeps well. The percentage of fat can be reduced by modifying it after it is prepared or by previously modifying the milk. It may be prepared from skimmed milk. Rice flour, barley water or sugar may be added to increase the percentage of carbohydrates.

In *The New York Medical Journal* of April 4, 1908, Dr. Charles E. Carter of The

New York Postgraduate Medical School treats of the use of "lactacid" milk, giving the following results:

1. Lactacid milk is obtained from clean, fresh cow's milk, fermented by the lactic bacillus, isolated by Cohendy in 1903, and which he describes as "not growing under 35°F. nor over 63°F." The degree of acidity is limited by the time allowed for the activity of the bacilli.

2. Buttermilk feeding and lactacid-milk feeding are absolutely distinct. The former affords an uncertain and temporary expedient always, and being a spontaneously sour milk contains, besides the lactic ferments, generally yeasts which produce alcohol.

3. In infant feeding the frequent desideratum of high proteid percentages may be found not only possible but also safe with lactacid modification of milk.

4. The digestive enzymes of natural milk are not killed as in the unnatural processes of sterilization or even in pasteurization, but are augmented by the bacillus bulgaricus.

5. Lactacid milk is logically indicated in children, (a) in difficult feeding cases; (b) in fermentative diarrheas; (c) in specific enteric infections of typhoid or tuberculous bacilli.

6. From the extremes of the scientist and the enthusiast, from Herter and from Metchnikoff, come corroborative evidence that lactic acid inhibits intestinal putrefaction.

7. Promulgation of the general desirability of undiluted lactacid milk as a beverage can but lessen the ills that flesh is heir to, even if it cannot accomplish, as Metchnikoff hopes, the prolongation of man's allotted span.

In *The St. Louis Medical Journal*, July, 1907, Dr. Christenson (Prof. of Diseases of Children in the Medical Department, University of Minnesota) states that given to children this modified milk produced remarkable gains in weight and remarkable improvement in the general condition of those having from simple indigestion to atrophy, the ages ranging from eight weeks to nine months, and under observation from ten days to two weeks in cases of simple indiges-

tion to from three to five months in the more severe types.

The usual directions are to add to a quart of milk one-third of a quart of water, a pinch of salt, then crumble one of the tablets into the vessel and let stand at ordinary room temperature till soured, usually from twenty to thirty hours. This is then thoroughly stirred with a spoon and placed on ice till ready for use. In many cases barley water and arrowroot water were employed for the most part, and cane sugar in varying proportion added to sweeten the food.

As a routine practice the bowels were emptied by a castor-oil purge or a few 1-10-grain doses of calomel, and food of all sorts withheld for from twelve to twenty-four hours, only cool sterile water being allowed.

In some cases this treatment was supplemented by colon flushings with the salt solution, and washing of the stomach was found desirable in a few instances. The advantages claimed for the food-preparation made by these tablets over ordinary buttermilk are: (1) The cream is left in the milk, increasing the nutritive value. (2) In the ordinary method of making butter the milk is allowed to sour from whatever accidental bacteria may get into it. Usually the lactic-acid germs predominate, but along with these there are always a greater or less number of putrefactive bacteria so that the resulting buttermilk is a mixture of true lactic acid and putrefactive products.

In the event of not using sour milk in acute gastrointestinal conditions, many begin with the use of barley water, then albumen water, whey, beef juice, liquid peptonoids, with creasote and bovine.

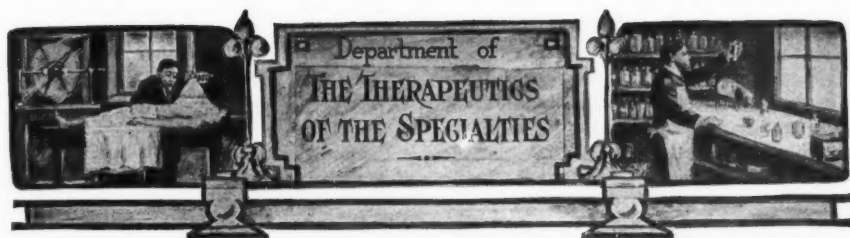
In case of rejection by the stomach of all food resort to rectal enemata. Late in cases I have found zweiback to be well liked.

Washing of the stomach should not be entrusted to the mother, unless she be able to perform those duties intelligently.

See the patient as early as possible, as often as necessary. Do not overfeed.

Attend to personal hygiene. Keep the little one as clean as possible, inside and out.

Don't play a "waiting game."



COLLECTIONS OF PUS IN THE FEMALE PELVIS

The origin of pelvic pus-infections, both from within and without the body, how they may be recognized and some important points in differential diagnosis

By W. F. CHURCH, M. D., Greeley, Colorado

COLLECTIONS of pus may be found in any part of the pelvis, either within or outside the peritoneum. Any part of the body of the uterus may form one wall of an abscess, which may lie at the fundus with the intestines above, at the sides, in front or behind. The broad ligaments, the fallopian tubes, around and in the ovaries, and the pouch of Douglas are the most favorable sites of election for the collection of pus. It may collect between coils of intestines, in the prevesical space and rarely in the walls of the uterus. Multiple abscesses are quite frequently found.

The Methods of Pelvic Infection

As an aid in diagnosis it is of great importance that the methods of pelvic infection be thoroughly understood. Abscesses in the pelvis are the result of infections *from within or from without*. From within, a perforation of the bowel at the site of an old adhesion or an inflammation of an appendix whose tip hangs well over the edge of the pelvic brim may let loose almost countless hordes of the bacillus coli communis, whose remarkable activity soon results in a pelvic abscess. A cystoma may become active to the point of suppuration or a hematoma may rupture and suppurate, resulting in a collection of pus.

Infections from within are rare compared to the frequency of infections from without.

The route of invasion for pus-germs from the outside lies through the vagina and uterus and from thence by way of the tubes, lymphatics or veins, the most frequent invaders being gonococci and streptococci, yet the other pus-germs are not rare. Acute pelvic infections most frequently follow labor and abortion, but may be due to the use of unclean instruments about the cervix or dirty local treatments. In these infections the streptococcus most frequently plays the leading part.

The streptococcus passes through the wall of the uterus either by way of the lymph-spaces and thence through the peritoneum into the peritoneal cavity or by way of the lymph-vessels through the uterine wall into the uterine or ovarian plexus of lymphatics. It may follow the veins, and rarely enters by way of the tubes.

The gonococcus usually extends along the mucous membrane of the uterus and tubes and but rarely spreads by way of the lymphatics and blood-vessels. The germs escaping from the peritoneal opening of the tube set up an inflammation ending either in an exudate with adhesions or a collection of pus.

The Germ-Cause of the Suppuration

While suppuration may be due to more than one organism, one particular germ usually is the most active and chief cause.

It is of considerable importance in diagnosing an abscess to decide if possible from the history of the case which pus-organism is present. If the history points to the streptococcus or staphylococcus as the probable offender the routes of invasion should be considered and where abscesses would be likely to form. A clear history of gonorrhea directs attention to the tube and its immediate vicinity as the immediate seat of suppuration.

In pelvic collections of pus there is always a history of an infection, though in many cases it may not be clear. When a clear history can be obtained in subacute and chronic cases it may prove of great value in diagnosis.

Pus-formation in the pelvis may perhaps be best considered, *first*, as the result of an acute infection, and *second*, as the remaining focus of a subacute or chronic condition. In any case it represents a temporary triumph for the protecting forces of the body, but remains a deadly menace as the surrounding barrier may at any time be broken down, when the prisoners will speedily destroy their captors.

Acute Pelvic Infection

The acute infection following labor or an abortion may be so mild as to inflict but little damage, or so virulent as to kill in a few days, or it may be of varying degrees of severity between these extremes. Undoubtedly only a small percent of cases results in the formation of an abscess, but when such is present it is of the utmost importance that an early diagnosis be made. If the gonococcus is the active agent the symptoms of acute pelvic inflammation will usually be delayed to the beginning of the second or third week, when the tube becomes involved, and later the peritoneum. If due to other pus-germs, symptoms usually develop more rapidly and the infection may quickly spread to the peritoneum, producing a pelvic peritonitis, or to the cellular tissue, resulting in cellulitis, or both conditions may be present. With the usual constitutional signs of inflammation present, such as increased pulse-rate with rise of temperature, together with localized pain and tenderness, dis-

tinctive information may be obtained from physical examinations.

Pus Accumulations in the Pelvis

If the temperature and pulse remain high at a time when marked symptoms should abate, with the possible development of chills and sweats and the general appearance of a more grave condition, suppuration may be suspected and further information should be sought by vaginal and rectal examinations. If the board-like hardness of the fibrinous stage of cellulitis or peritonitis has given way to softened areas pus presumably is present. In addition to the softening the pressure from the pus may cause the parts to project downward into the vagina, especially when its location is in Douglas' cul-de-sac or at the sides of the uterus. Positive information may be gained by the insertion of a small aspirating needle in the area of softening or in the bulging portion and the withdrawal of pus. This procedure also gives an opportunity to examine the pus to determine what micro-organism is present.

When a serous exudate fills the cul-de-sac and extends upward toward the umbilicus, it may be impossible by touch to tell if serum or pus is present. In cases with pus the temperature usually is higher and more constant and the general condition more serious. A tumor containing serum is more elastic than one filled with pus, while with the latter the vagina and cervix are more markedly swollen and edematous, with a bluish discoloration. In abscesses of the cellular tissue pus usually collects at the sides of the pelvis but may be found by extension above Poupart's ligament under the abdominal wall.

In suppuration there is a leukocytosis averaging between fifteen and sixteen thousand. As there is always an increase in the number of leukocytes during any acute pelvic inflammation it may be difficult to decide that the count had become greater at the time of suppuration unless blood examinations had previously been made. Of greater value perhaps than leukocytosis alone is a high percentage of polymuclear cells.

Fowler's "Surgery" states that "eighty-five percent or over of polynuclear cells was never seen without a purulent exudate or gangrenous process irrespective of the leukocyte-count."

Appendicitis and Pelvic Abscess

In a pelvic abscess caused from a suppurating appendix the early symptoms are valuable in diagnosis. In appendicitis pain usually is first located near the central or upper portion of the abdomen or higher up than in inflammation of the pelvic organs. This is followed by nausea and vomiting, symptoms more constant and pronounced than in inflammation of the adnexa. Later the pain becomes localized in the right side, with tenderness and rigidity lower than in the usual form. One authority claims that the muscular resistance is greater than in true pelvic disease. With acute symptoms well marked it may reasonably be expected that because of less resistance an abscess would form at an earlier period in appendicitis than in infections of the pelvic organs. If a rectal examination discloses a mass at the right side of the pelvis, perhaps distinct from any connection with the uterus, suspected to contain pus, at a period in the course of the disease when appendical abscesses appear at the usual site, the diagnosis is reasonably certain.

In collections of pus in the cellular tissue or tube that have perhaps neither been dis-

covered or treated but have been present for various periods, there are quite frequently recurrent attacks of pelvic inflammation. Until the symptoms abate and the inflammation disappears, with partial absorption of the exudate-forming adhesions, the abscess cannot be located. In pyosalpinx, after all inflammation has subsided around the tube, various symptoms are present such as menorrhagia, metrorrhagia, painful defecation and more or less pain in the pelvis, aggravated at menstruation or on exertion. In a recent pyosalpinx the mass usually is tender. In the chronic form it may be possible, by bimanual examination, to locate a hard, irregular, rounded tumor attached near the middle line to the uterus. If serum or blood instead of pus fills the distended tube it's wall is usually thinner, giving a softer feeling to the examining finger. In two-thirds of the cases from gonorrheal infection both tubes are diseased and a mass can be felt on both sides. In an examination not long after an acute pelvic inflammation it may be difficult to differentiate a pus-tube from a mass of adhesions.

Under appropriate treatment these exudates may disappear in a few weeks or months. Others claim to have known of hundreds of cases where the exudate has disappeared. If doubt exists regarding the diagnosis the patient should be carefully watched and given the benefit of conservative treatment until the case is clear.

ENERGY will do anything that
can be done in this World;
and no talents, no circumstances,
no opportunities will make a two-
legged animal a man without it.

—Goethe

RHEUMATISM FOLLOWING LAPAROTOMY

An interesting case in which, following operation, symptoms developed simulating those of septic infection, but which proved due to true rheumatism. An effective method of giving salicylates

By GORDON G. BURDICK, M. D., Chicago, Illinois

THE following curious case occurred in my practice during the past month.

Following a street-car accident to the woman a large tuboovarian abscess formed which discharged through the rectum, but rapidly refilled and began to discharge slowly through the uterus. A pure culture of the colon bacillus was obtained and the vaccine method used in order to try to stop the infection without an operation. It looked for a time as if we were in a fair way to obtain success; the discharge lessened and nearly ceased, when she was caught in a fearful rainstorm and was compelled to ride five miles in her wet clothes. A "cold" resulted that lighted up the old peritonitis and required rather vigorous treatment for two weeks before it could be controlled. This left her with an abscess the size of an orange in the left tube and ovary.

The pain was severe and an operation was determined upon. I was fortunate in removing the tumor with no leakage and a satisfactory reaction occurred. In forty-eight hours the temperature ran up to 103°F. and caused considerable anxiety as to its source. The blood-count did not show sepsis, and the trouble was a mystery until the next day when all her joints were stiff and painful; a typical attack of acute articular rheumatism resulted.

It was found impossible to give any medicine by way of the stomach, owing to its irritability, so she was given 10 Cc. of streptococcic serum hypodermically and 30 grains of sodium salicylate injected in the rectum, and repeated every four hours.

In twenty-four hours she was free from pain and could use her joints well, only to be followed forty-eight hours later by a reaction. The serum was repeated and 20 grains of sodium salicylate solution was in-

jected in the veins. This was followed by perfect relief in eight hours, with no recurrence of the trouble for ten days, when some local trouble in the wrist and shoulder caused me to give another venous injection and continue the rectal administration of the salt. She made a perfect recovery and no further indication of the disease is present. She was in a pitiable condition during the attack, the original operation being disagreeable enough without having every joint so swollen and tender that she could not bear to have them moved the slightest.

I have tried this method in numerous cases of acute articular rheumatism and always with most prompt relief. It would seem that the method might be of use to the general practitioner, rather than following his usual penchant for giving morphine for several weeks in order to lessen the pain and thereby allowing the disease to become so firmly seated as to make a cure impossible before irreparable damage has been done.

The technic is simple: A sterile syringe charged with a sterile solution is inserted into one of the prominent veins of the forearm, and in order to ascertain if the point of the needle has penetrated the vein some of the blood is withdrawn into the syringe. The tourniquet is then removed and the solution is slowly injected into the vein.

As yet I have never seen any untoward effects, except in one case where a staggering gait supervened for about twenty minutes; but this rapidly passed away and left no bad results.

Of course it should not be necessary at this late day to caution the operator to avoid injecting air, or to be careful as to perfect asepsis of his instrument, yet it is possible that the advice may be necessary even today.

THE TREATMENT OF AGNE ROSAGEA

Simple methods of treatment which will be found useful in this disease, including the control of the diet, internal medication, external applications and the use of the x-ray

By J. PHILLIP KANOKY, M. D., Kansas City, Missouri

Professor of Dermatology, University Medical College, Kansas City, Missouri

IN combating an angioneurotic condition such as rosacea, nothing is of greater importance than a careful supervision of the diet and the proper regulation of the digestive function. The Continental people accuse us, and not unjustly, of being in a perpetual hurry, and nowhere does this rush and lack of deliberation cause more harm than at the table. While the Fletcher doctrine may seem ridiculous to some, it is so thoroughly tinctured with common sense and sound reason that we may safely, and with most beneficial results, occupy a conservative middle ground.

Diet for Patients Suffering from Rosacea

I always impress upon my patients the necessity of restricting themselves to simple, easily digested foods, and instruct them to eat slowly and masticate thoroughly. It is well to give them a "to-be-avoided" list. This varies somewhat in every instance but, as a rule, the following articles are interdicted: Fresh wheat-bread, pastry, rich soups, pork, gravy, fried or highly seasoned foods, oatmeal and other gummy cereals, liver, kidney, salted or preserved meats and fish, shell-fish, pickles, vinegar, ice-cream soda, cheese, and excessive quantities of candy and sweetmeats. Fresh fruits, excepting bananas and strawberries, are seldom detrimental. Little or no liquid should be taken with meals. Coffee, if allowed at all, should not exceed one small cup, taken at breakfast-time. Tea, alcoholics and ice-water are absolutely prohibited. Tobacco, especially in the form of cigarets, generally is harmful.

The general health must receive attention, and regular habits be observed if possible. The patient must be given to understand

that no amount of medicine alone will bring about a cure, and that intelligent cooperation on his part is absolutely indispensable.

Constipation, when present, is to be remedied, always bearing in mind that nature's method is best. Graham, corn, or whole-wheat bread, shredded-wheat biscuit, and moderate amounts of vegetables, with plenty of fresh, pure water drunk between meals, all are of value. I find a thorough cleaning out of the intestinal tract, once every fortnight, of material benefit.

If intestinal fermentation is a disturbing factor I employ the W-A sulphocarbolates, two tablets, in hot water, after each meal. Ichthalbin, in 0.3-Gram doses, together with extract of nux vomica, 0.015 Gram, before each meal, may often be administered to advantage. In many cases, especially where the hemoglobin percentage is low or the bowels are sluggish and irregular, the use of Startin's mixture does good, the formula for which is:

Magnesii sulphatis	30.0
Ferri sulphatis	0.25
Acidi sulphurici diluti	8.0
Sodii chloridi	2.0
Infusi gentianæ, q. s. ad...	120.0

Directions: Take a tablespoonful in half a goblet of water one hour before each meal, using a glass tube because of the iron. If there is any stomachic indigestion this prescription may be alternated with the following:

Papain	8.0
Sodium bicarbonate	16.0
Charcoal	16.0

Make into 50 tablets. Directions: Two tablets in a wineglassful of hot water before each meal.

Locally extremely hot or cold water is injurious as is also exposure to cold winds. The face should be bathed in soft, tepid water once or twice each day. Lotions are preferable to salves, being far more cleanly and pleasant to apply and fully as efficacious. The most reliable of these is *lotio alba*, with sulphur added. I commonly employ the following:

Zinc sulphate	2.0-5.0
Sulphureted potash	2.0-5.0
Sulphur	2.0-5.0
Rose water, q. s. ad	100.0

Directions: Shake well and apply once or twice daily by means of a cotton swab.

In some instances it is well first to remove any adherent grease by means of deodorized benzine. Comedones, if present, should be expressed with a Piffard extractor. If there is much dilation of the capillaries resort must

be had to electrolysis. Better results, with much less pain, are secured by using a small sponge (measuring 3 x 4 cm.) on the positive pole and applying it to a point near the opposite extremity of the enlarged vessel. Not only will less current be required but the applications will be shorter and far less painful than when the sponge is clasped in the patient's hand.

Of late years I have been employing the x-ray in these cases with very satisfactory results. Atrophy of the sebaceous glands is secured, the previously dilated and gaping follicles contract, and the oily seborrheic discharge, which is so frequent, troublesome, and persistent, is speedily checked. A low vacuum tube should be used, at a distance of four inches, and exposures of from five to eight minutes each should be given twice weekly.

A CASE OF PREGNANCY IN OLD AGE

In contrast with Dr. Pittman's case of pregnancy in extreme childhood, the author reports a case in which the mother was seventy years old when her child was born

By D. ZWIGTMAN, M. D., Niles, Michigan

THE case of childbirth at the age of nine, reported by Dr. Pittman (see pages 798-9 of June CLINICAL MEDICINE) is certainly interesting, although in British India it is quite common among the Hindoos, even at this early age.

The great question is: At what age is the possibility of pregnancy established and when does it end? Some maintain that the commencement of menstruation is the alpha and the cessation of it the omega. But there are examples galore where non-menstruating girls became pregnant, and as to the last category I would like to refer you to the annals of l'Hôpital Dieu, in Paris.

Pregnancy at the Age of Seventy

At the age of 70 years the widow T., from Garches, a little town in the neighborhood of Paris, presented herself at the

clinics of said hospital for an examination. The case turned out to be one of pregnancy of six months. According to the story, she had been at a festival six months ago, and convinced of the principle that wine is the milk for old age she took a little too much of it, got drunk and sat down on the roadside when her legs refused to serve her.

A young man, twenty-four years old, who knew her, offered to accompany her to her home, which was at a certain distance in the woods. She accepted and in turn invited the gallant cavalier to stay over night. He accepted and stayed not only one but four nights. His bravery seemed to make him a conqueror and to enable him to discover treasures which one would think to have been lost long, long ago.

To make matters short, the 70-year-old Venus at a certain day saw herself obliged

to widen her corset. It became alarming to her and a trip to the hospital was decided upon. Here her condition was found out, and on account of the peculiarity of the case she was persuaded to remain in the hospital until she had disposed of her surplus. In due time she gave birth to a

son. The child had little vitality and shortly afterward died.

This case is duly chronicled in the annals of the hospital and the report of it can be found in the *Journal de Medecine de Paris*, No. 26, 1881.

BURNS OF THE EYE AND THEIR TREATMENT

The character of eye-burns and the agencies producing them, their gravity, location and various methods which will be found useful in their treatment

By JOSEPH CLOTHIER, M. D., Philadelphia, Pennsylvania

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BURNS of the eye and its adnexa are among the common injuries to that organ which we are called upon to treat, especially in the larger industrial centers.

While these burns often result in little or no serious impairment of vision or motility of the eyeball, they are at times of very serious import and may cause such destruction of tissues as to obscure vision entirely, or may even be of such a nature as to cause loss of the eye itself.

Since the amount of destruction often depends upon the celerity with which treatment is instituted, it behooves us to have a proper understanding of these conditions and their possibilities, that the proper treatment may be employed with as much promptness as possible. On this account, and also because he is often the first to see these cases, they are of special interest to the general practitioner.

Location of Burns and How They are Caused

Burns may be limited to either the lids, palpebral or bulbar conjunctiva, or cornea, or all these structures may be involved in the more severe cases, and in the deep burns of the bulbar conjunctiva the sclera will be injured. As a matter of fact a burn of any moment is seldom limited to one part, as, for example in burns of the cornea, there is

usually involvement of the conjunctiva and often of the lid margins as well.

Among the more common agencies productive of burns and scalds may be mentioned acids, such as nitric and sulphuric, mortar, lime, hot water, steam, ignited gases, electric flash, incandescent chips of steel or other metals, molten metals, exploding powder, etc.

Burns by small incandescent particles cause only slight reaction, as a rule. On account of their diffusibility chemicals, such as acids and caustic solutions, spread very rapidly and extensively to the surrounding tissues. As a rule, however, they do not burn so deeply as substances in a state of ignition. The depth and gravity of the injury also depends upon the concentration of the liquids and the duration of the primary burning. An authority has shown that lime thrown into the eye, in mixing with the tears does not generate sufficient heat in less than ten minutes to cause serious injury to the ocular structures, so that, if seen immediately after injury, the offending substance can be removed before destructive changes have taken place. Following burns by slaked lime there may be calcareous infiltration of the cornea with destruction of its layers to depths that vary with the intensity of the injury. Only a slight portion of this deposit may be absorbed or removed

by separation of the superficial eschar, and consequently an intense degree of inflammation may persist for a long time with marked corneal vascularization.

Burns, or rather scalds, caused by steam from bursting steam-pipes and boilers are often complicated by lesions due to flying pieces of metal and glass.

The amount of destruction by fused metals depends upon their temperature. Thus burns from fused brass, steel, wrought iron, etc., the temperature of which is always above 1000°C ., are usually quite deep and produce extensive destruction, while drops of metals such as lead, zinc, tin, etc., which fuse at much lower temperature, may enter the conjunctival sac without producing serious lesion.

In the case of powder-burns the irritation from the grains of powder imbedded in the cornea may prove most annoying and lead to disastrous results.

Character of Eye-Burns

Burns of the skin-surface of the lids resemble similar lesions elsewhere on the body. If of the first or second degree they give rise to little if any deformity. In the deeper burns, however, healing will be followed by cicatricial contraction and displacement of the lid-borders, causing ectropion or entropion, or if the margins of the lids are involved, union of the raw surfaces may result, producing ankyloblepharon. Where the injury is limited to these structures alone, with no involvement of the eye itself, it should be treated like burns of a similar nature elsewhere on the body, by first removing any foreign substances and then cleansing with mild antiseptic lotions and the application of non-irritating ointments, such as boric-acid ointment, zinc-oxide ointment or carbolized vaseline. The edges of the lids should be frequently separated and kept well anointed to prevent their union. For the traumatic conjunctivitis, which usually is present, a lotion of boric acid will be all that is required. Where the granulation-surface is extensive, skin-grafting should be employed. Ectropion and entropion resulting from

cicatricial contraction should be remedied by appropriate operative procedures.

Slight burns of the conjunctiva, such as are caused by minute incandescent particles, produce little reaction. Where the destruction is more widespread or the cornea is involved the consequences are more serious. The chief danger of the deeper conjunctival burns, aside from possible perforation and loss of the eye, is in the formation of adhesions between the lids and the eyeball, a condition known as symblepharon. These adhesions may be very slight, but on the other hand may be so extensive as to cause considerable impairment of motion. If the lower cul-de-sac is burned adhesions will almost certainly form and the fornix be obliterated with consequent great limitation of the various ocular movements. Burns of the upper cul-de-sac without destruction of the lid are rarely seen.

Conjunctival and Corneal Burns

As already stated, in the majority of conjunctival burns of any extent the cornea is involved. This is especially noticeable in injuries by acids, caustic solutions, hot water, etc. The corneal lesion may vary from a simple desquamation of the epithelium to a more or less extensive ulceration and necrosis with perforation and destruction of the eye. It is not always possible to tell on first examination what the ultimate result, especially as to vision, will be. Eyes that are apparently but slightly injured may be lost in a few weeks' time, the lesions being deeper than were indicated by the early symptoms. On the other hand, it is surprising at times to find the cornea return to its normal condition in cases where the injury seemed to be very serious.

From this it will be seen that it is a difficult task to give a positive opinion as to the degree of corneal burns. In general, however, if the cornea presents but a slight loss of epithelium, or if more extensive, the opacity presents a thin grayish appearance, as if covered with coagulated albumin, through which the pupillary margin of the iris can be seen, the prognosis is usually favorable. Where the deeper corneal layers

are involved, as indicated by a dense grayish yellow eschar, the healing will be complicated by a more or less dense opacity and impairment of vision. There is, too, always the grave possibility of perforation in these cases.

The treatment of these burns of the eyeball consists in first removing any of the offending substance that may be present. Pieces of metal may be removed with the spud. Lime should be washed out by a jet of cold water. Acids may be neutralized by a solution of sodium bicarbonate. After removal of these foreign bodies and careful cleansing of the eye with solution of boric acid, one or two drops of a 1-percent holocaine solution should be instilled into the eye and repeated every two hours if necessary to relieve the pain. Holocaine is pre-

ferred to cocaine because in addition to its anesthetic properties it is antiseptic, and furthermore it has no detrimental effect upon the corneal epithelium, such as cocaine has.

Should the cornea be involved, a 1-percent solution of atropine should be instilled three or four times a day. Ice-cold compresses must be employed continuously in the severe cases, less often in those of lesser moment.

To prevent adhesions forming, nothing is better than the occasional instillation of a few drops of sterilized olive oil, at the same time instructing the patient to separate the lids from the eye at frequent intervals. To further prevent these adhesions the surgeon should pass a probe into the fornices occasionally. Lastly, but by no means least important, *do not bandage* these eyes.

ISCHIORECTAL ABSCESS AND FISTULA

The early recognition and treatment of these conditions, with a report of experience. Read before the Gross Medical Club, December 19, 1907, Buffalo, New York

By MONROE MANGES, M. D., Buffalo, New York

AN ischiorectal abscess, as the name implies, is one located in the fossa of that name. It may be due to cold, traumatism or lymphatic extension from some suppurative condition adjacent. Proctitis frequently precedes it and when neglected may cause stricture with consequent ulceration or simple ulceration leading to infection within the fossa. Perforation of the lower rectum by foreign substances—small bits of glass, fish-bones, shells from nuts, etc.—may, and often do, cause abscesses.

The breaking down of glands of strumous and tubercular patients, in this locality, although not properly classed as an abscess, also causes fistulæ of the worst and slowest kind to heal. It is a remarkable fact that these rarely contain tubercular bacilli. Statistics show that only about five percent of tubercular patients have fistulæ, while

fifteen percent of fistula patients have tuberculosis. It would appear from this that fistulæ bear a causative relation to tuberculosis. The conditions—heat, moisture, pus, darkness, filth, etc.—all are conducive to the development of this disease.

When a patient calls a physician for this ailment as a rule it is so far advanced that it is impossible to prevent the progress and extension of the abscess; this is especially true if the doctor waits to be sure of his diagnosis, for there is usually much pus accumulation before fluctuation can be detected through the resisting muscles and the inflamed cellular tissues.

Ischiorectal Abscess not Abortable

There is no doubt, as Cripps, Allingham, Matthews, Kelsey and others say, that an ischiorectal abscess cannot be aborted. Accordingly there is no abortive, palliative

or temporizing treatment that will avail, and attempts along this line are worse than useless for they simply permit the inflammation to extend and the abscess to burrow in different directions, destroying and breaking down tissue in the lines of least resistance.

How a cold produces periproctitis or ischiorectal abscess is a question, yet many attribute them to sitting on a cool stone or on ice. It would seem that such cases are more likely to be coincidences and not causes, although most authors give cold as a cause.

The symptoms are a vague, indefinite pain not positively located, but as swelling increases bowel-movements become painful and may be followed by a chill; constipation is present during the increasing fever. Should the abscess rupture, there will be alternating pain and discharge with decline of fever, and it is safe to conclude that the abscess has broken into the rectum. (This should never be permitted where the physician has seen the patient within a few days before.) In this case it will be well, if the patient is seen a few days after, to pass a probe from within, and if the cavity extends down toward the integument an external opening should be made and the cavity cleaned out, and after using a strong caustic or astringent the wound should be packed with gauze. The inner opening will often heal in a few days, and by careful dressing and packing a permanent fistula may be avoided. To be sure it is much better in all cases to make a free external opening early, for by breaking up the pockets and curetting and packing, the possibility of a fistula is avoided. These dressings must be made every other day at least, for ten days or two weeks.

If it is the first time the abscess formed and there is no internal opening, and the abscess has been opened before the entire fossa has been implicated, nine cases out of ten should heal without leaving a fistula. However, if there is a history of a previous abscess which has opened internally or externally the prognosis is not so favorable and it is better to explain to the patient the pos-

sibility of a remaining fistula if he does not permit a thorough operation and aftertreatment.

A Case Which Was Not Well Treated

I wish to relate a case illustrating faulty treatment of an abscess which had partly emptied into the rectum and which was opened on the outside on the following day but was not followed by proper aftertreatment.

Joseph K., foreman at steel plant; age thirty; had enjoyed good health until attacked with a large abscess of the rectum. Was then working in Pittsburg. Used poultices, etc., for over a week, under advice of a doctor, in order to "bring it to a point." During the night it broke into the rectum and partly emptied itself. His physician lanced it deeply on the outside the next morning and washed it out with a small syringe. He instructed the patient to syringe it out each day. This he did until the opening closed. After a few weeks there was some soreness and a small quantity of pus followed by a little sticky discharge. This kept up for a long time; at times there was a feeling of uneasiness inside the rectum which seemed better when the discharge externally kept up. He never had swelling or chills after the abscess was lanced. Before coming to me he noticed that flatus escaped from the external opening.

Here was a case of uncomplicated fistula, complete. This man had never been warned that a fistula might result from the treatment received. Had the doctor opened this abscess before it broke internally it might have been healed under treatment given which, as mentioned above, was faulty. The doctor in the case should have warned him that a fistula might result; in this way his incompetence would not have been interpreted as ignorance.

Early Diagnosis Important

One should diagnose these abscesses early; open them early, even before fluctuation is positive; the introduction of a long aspirating needle can do no harm if one is fearful of introducing a scalpel to confirm the diagnosis.

It is always best to make a free incision so that it will be as long as the average diameter of the pus-cavity. If it is the first time the abscess has formed and it is opened early, this one incision will be sufficient.

If the history of the case gives previous attacks, and this abscess is large when opened, it is altogether probable that there are pockets or diverticula at some angle to the main opening. These should be opened into the main incision through the integument if extending any distance from the main incision. The wound should then be washed with bichloride of mercury solution, followed by hydrogen peroxide after curetting or removing all the pus, etc., and then cleansed with normal salt solution or boric-acid solution. All small arteries within reach should be tied; however, packing the wound will stop all hemorrhage beyond the reach of the clamp. The wound should be dressed the next day after cleansing with an antiseptic solution and gauze placed into the top of the cavity. After this a dressing every other day will suffice. The packing should not be too tight and should be kept up until the cavity is healed to the surface.

When possible it is best to have these patients in bed, and keep them there for a week or two; this is so for several reasons: First, it makes the patient feel that it is an important and serious thing and he is impressed with the necessity of the aftercare. For the same reason a general anesthetic may be given; besides, it makes it possible to do the work more thoroughly. Finally, it dignifies the work as an operation and makes it possible for the doctor to charge a fee commensurate with the worth of his services. No patient is willing, if one speaks only of opening an abscess or lancing an abscess, to pay anything in keeping with the responsibility involved. It is the same way if one speaks lightly of "snipping off external piles."

The Incision to be Employed

In regard to the direction of the incision it has been my experience that incisions made parallel to the rectum and in a direction with the long axis of the sphincter have given better results than those at right angle

to the sphincter, since the latter are closed by the contraction of the sphincter, while the drainage, after the packing cannot be placed, is poorer or obstructed. I have had cases where circumstances were such that the patients could not give up work, on which I operated with a local anesthetic, permitting them to continue their work. It is needless to say that it was the first attack and the diagnosis was early, with no guarantee against a consequent fistula. Many have made good recoveries, but there is a tendency for patients to look upon it lightly, pay little and quit before cured—later on one finds them operated upon for fistula by some one who is likely to say that "your former physician was ignorant or an indifferent fool."

Fistulae, as stated above, are the result of ischiorectal, perineal or marginal abscesses. With the history of abscess we may suspect fistula if there are alternate attacks of swelling and pain, discharges from the rectum, or pus or serous discharges upon the skin surrounding the anus. (Often this discharge is very slight, and if the opening of the fistula is near the anal margin it may be overlooked.) However, there may be a sticky discharge which causes an eczema or pruritus, or when in the perineal body there may be itching of the scrotum or frequency of urination. At some time the external opening will close until a slight accumulation of pus forms, when it will reopen and discharge again. A history of this kind should lead one to suspect a fistula.

Symptoms of Internal Fistula

On the other hand the history of an abscess forming about the rectum, with the history of chill, fever, swelling and soreness with a disappearance of the same without breaking externally, should lead one to suspect an internal fistula. Sometimes the abscess preceding internal fistula may be small and the patient may think he has piles and he may be treated for them. Later on the sinus may extend and the inner opening may partly close and another abscess may form which may open into the bowel or may open on the outside and he will have a complete fistula.

Should the second abscess be opened, which often is the case, without the physician going into the previous history of the case, he is very likely not to take into consideration the sinus formerly communicating with the anus; the result is, that when the external sinus heals, it will not heal the sinus from the previous abscess. What is the result? Gradually another abscess will form which will find harder work to follow the path of the former external sinus; it will spread and follow a line of less resistance and may take the direction of the opposite fossa or point several inches away from the former external opening and produce an arch or fork or a horseshoe fistula, which will complicate things for a radical operation.

We now have our fistula. "How to cure" is another thing, and "what is the prognosis" is the thing which interests the patient and often establishes a doctor's reputation.

How to Cure the Fistula

There was a time when a fistula was an incurable disease, and that memory still exists in the mind of the laity. There seems to be a prejudice against operating for fistula, which has grown not from the radical operation itself so much as from the failures to cure by all the methods used by those who profess to cure without the radical cutting operation.

It is quite natural for a patient to believe the doctor who promises a cure without pain or without cutting; for this reason the patient tries the wrong ways and the incompetent doctors before he approaches the surgeon or rectal specialist. It is a great deal easier going to heaven on flowery beds of ease than it is by backing away from the frying pan—thus he reasons.

As a consequence many of these patients wait years before submitting to a surgeon; in fact, many wait until they have had half a dozen abscesses and four or five external sinuses and then expect to be cured in a couple of weeks, as they could have been had they approached a surgeon when their ailment was first diagnosed. This is repentance *in extremis*; these are the cases which try a physician's soul and patience and skill.

There are half a dozen methods for the cure of fistula, but I shall dwell on the cutting operation as it is the one that we fall back on when all others fail. There is none which gives the results in all cases like this method. We can not deny that occasionally there may be a case selected for one of the different methods which is successfully treated, but all the other methods are slower, less certain, and the total amount of pain will equal the amount of suffering from a radical operation.

Of course these methods are more applicable to recent and uncomplicated cases; they should never be used in old and multiple or complicated fistulae. I refer to dilatation by any means, injection of chemicals of a caustic or astringent nature, ligation (silk or elastic) excision, cautery, employment of fistulotome, etc.

The Aim of the Fistula Operation

The operation for fistula should aim at destroying every sinus within its pockets in such a manner that it will heal by granulation or first intention (as aimed at in the operation by excision) and at the same time aim to preserve the use of the sphincter intact.

If the fistula is an old one, with repeated abscess-formation, there will probably be an internal opening somewhere; it may not be in a direct line with the external opening, but may be half an inch or more higher up, or it may be around the circumference a quadrant.

This can be found more easily when the patient is under the anesthetic as there is then no resistance. It is my practice when in doubt about the external opening to use hydrogen peroxide full strength; this will expand the sinus and the peroxide will bubble up and escape through the inner opening if it exists. Besides, it will pass into any branch-sinus or pockets.

It may be possible that there is no inner opening. Then one should be made at the point where the probe or director approaches the rectum. The grooved director is then passed from within outward; a clean cut is made through the sphincter and all, the cut

being at right angle to the sphincter-fibers, as muscular tissue heals better when cut at this angle. A bichloride solution is then run over the surface. It is then my custom to exert pressure along both sides from the outside upward along the incision and to look for further bubbling of the peroxide. If no bubbling is seen then, a probe should be used along the back of the incision and carefully tried on both sides. If no opening exists internally, one should search very carefully for a sinus running upward or horizontally. Should a small sinus exist, it should be split open longitudinally into the rectum. I once had a case where I overlooked such a sinus and had a small internal fistula remaining after the main sinus and the sphincter had healed. It is a part of the treatment to cut the posterior wall of the sinus along its entire length. Should there be other external openings communicating with the main sinus, they should be treated likewise and made to communicate with it.

The Dressing of the Wound

After all the sinuses have been treated, all bleeding points should be checked by clamping and ligature, the wound dusted with iodoform where it is permissible, although on account of the odor I rarely use it, as aristol, iatrol, red iodide of bismuth, etc., answer the purpose equally well. The wounds are then packed with iodoform, bichloride or bismuth iodide gauze. This dressing is left in place one or two days, when the packing is removed and the wound carefully treated with antiseptic solutions and redressed, the gauze being placed into the wounds with less pressure. The wound should be watched most carefully to see that it does not heal across at either end above the granulating surface; should this occur, one must break down the bridging tissues by the gentle use of a probe or the handle of a scalpel.

This dressing should be held in place by a T bandage; should the patient be subject to a cough or be a tubercular one I put on a large compress of cotton or of curled wool and make pressure with the perineal bandage tightly drawn. If after five or six days

the patient shows a little fever and a little discharge of pus from the sinus at any point, or some point of the wound is not healing, look for a sinus or feel along the sides of the sinus for a hard lump or a tenderness under the skin; often a little pocket or sinus may exist or a little abscess cavity whose connection is cut off from the main sinus may exist; if so, lay it open to the main sinus at once.

The Aftertreatment of the Case

These patients recover more quickly when confined to bed or the house. However, if the operation has been for a simple direct sinus and the patient is anemic or tubercular he may be permitted to sit up after a week or may ride in the open air.

The diet should be liquid, light and nourishing the first week.

The bowels usually do not move for four or five days, due to the cutting of the sphincter. If for any reason the sphincter was not cut it ought to have been dilated, which would also have delayed the movement of the bowels. After the first movement of the bowels, which should be rendered liquid by some saline laxative, it will be sufficient if they move every two days. The sinuses should be washed clean with an antiseptic solution after each movement and redressed.

Two or three weeks will suffice for the complete healing of the sphincter and the wound. It is wise to keep the stools soft or liquid for a month, in order not to strain the sphincter. In the worst cases, where there have been three or four sinuses running more than half or almost around the circumference of the rectum, the dressings will be tedious and require patience and care. These cases often will take six weeks or two months to cure.

What is the Prognosis?

The prognosis in these cases of fistula is far better than that of much surgical work, is much better than in strictures or prostatesctomy; the successes are as great as in appendicitis, while fatalities are rare, more patients return when operations are equally well done, and the results are more satisfac-

tory than much gynecological work. But with all these things in favor of the treatment of fistula the patient must not be lost sight of in our prognosis.

Patients with cirrhosis of the liver, tuberculosis, Brights' disease and organic heart disease should be handled with the same reserve and judgment in prognosis that would be given them were they contemplating a serious major operation.

The sphincter-muscle should never be cut in more than one place.

The prostate and vagina should be carefully guarded when operating on a fistula in the perineum.

In very bad or compound or complicated fistulae occasionally, but rarely, incontinence of the bowel may follow. Fortunately this most deplorable has not occurred in my own practice.

== SURGICAL THERAPEUTICS ==

INFLAMMATORY WRY-NECK

For the relief of the pain of inflammatory torticollis there is nothing so good as intramuscular injection of sulphate of atropine with morphine: 1 milligram (gr. 1-64) of the former and 1 centigram (gr. 1-6) of the latter. Sometimes permanent relief of the spasmodic condition can be obtained from the use of colchicine salicylate, one centigram (gr. 1-6) every four hours.

VARICOSE ULCERS

When varicose ulcers are very stubborn the following solution may be ordered:

Alum	4.0 (dr. 1)
Sugar of lead...	16.0 (oz. 1-2)
Water	1000.0 (qt. 1)

Saturate gauze with this solution and apply to the ulcer. Cover with rubber protective tissue and bandage very tightly. Change daily.

NEURALGIA OF RECTUM

In rare cases the most careful examination will fail to show any local source of irritation and the surgeon is compelled to regard the pain as of neuralgic character, but it must never be forgotten that prostatic trouble may apparently point to rectal disease; so this gland must always be examined in obscure cases. Also coccygodynia in women may simulate rectal pain. The anal crises of tabes must be excluded, and hysteri-

cal anal spasm. When all but "neuralgia" have been eliminated one may order (if it cannot be avoided) morphine or opium and give belladonna in large doses, supplemented by hot sitz-baths, hot water and steam douches, hot compresses, mud-baths or similar measures to relieve the pain. The most durable benefit may be obtained by daily introduction of a thick bougie into the rectum; the beneficial action of the bougie undoubtedly being due to the stretching of the nerves, as in the treatment of neuralgia elsewhere.

CANCER OF APPENDIX

A few cases of primary carcinoma of the appendix vermiformis have been recorded. In most instances it has followed an attack of appendicitis and has been discovered in operation for either presumed chronic appendicitis or for other intraabdominal troubles. The only treatment is careful removal of the mesoappendix and of a large area of the cecum with the affected area and excision of any discoverable enlarged glands in the neighboring areas, particularly mesenteric.

BURNING FOOT

There is a peculiar condition known as erythromelalgia, due to some disturbance of the plantar nervous or arterial supply, especially prone to occur in those who work barefooted. It begins with a "pins and needles" sensation affecting the soles of the

feet, and progresses to an acute burning sensation, which becomes so severe as to prevent walking and necessitates the administration of narcotics to produce sleep. It becomes chronic after a time, swelling and sclerodactylia occur like cellulitis, but there is no evidence of an infective process. The use of narcotics and sedatives gives but temporary relief; nor do lubricants, ointments or other local applications seem to do any good. The best treatment is to immerse the feet twice daily in very hot salt water, followed by bandaging, with injection of 5 grains of antipyrin deep in the tissues at the worst spot, two or three times at intervals of a few days. Extremely bad cases demand incision and resection of the nerve supplying the affected area.

SUPPURATIVE ARTHRITIS

Infected joints may be filled with Harrington's solution, after thorough surgical cleansing, the solution being allowed to remain in contact with all synovial surfaces for from three to five minutes; it is then irrigated or sponged away, and the wound dressed as required for free drainage. This is especially important because Harrington's solution has, besides its established antiseptic property, the power, when applied to a raw surface, of producing a copious discharge of serum, thus aiding the washing away of noxious elements from the wound.

RETROPHARYNGEAL ABSCESS

This trouble generally occurs in children under 5 years of age, probably on account of the unusual activity of the lymphoid tissue: infectious material being transmitted to the connective tissue back of the pharynx from any acute infectious process in the throat, ear, tongue, nose or accessory sinuses. Quite often pharyngeal inflammation with infiltration occurs without suppuration, rarely with such swelling as to necessitate tracheotomy. This should be performed whenever cyanosis becomes pronounced, if no fluctuation can be detected in the inflamed areas. In many cases incision

should be made in the median line of the throat while the child's head hangs over the end of the table, the opening being enlarged with the index-finger to open every pocket of pus. In the chronic cases (tubercular) drainage should be made by external incision rather than through the mouth.

HYPERNEPHROMA

Among the tumors of the upper abdomen hypernephroma must not be forgotten, though fortunately it is rare. This is a growth of the adrenal gland; or it may be of misplaced adrenal structure in some other organ or tissue. Sometimes the growth remains small and encapsulated; in other cases the neoplasm may assume enormous dimensions with metastases, just as any other malignant tumor. The primary tumor is most often found in the kidney; the secondary deposits in the bones, though any structure may be the site of metastasis. Cases have been reported in which the tumor resembled aneurism of the abdominal aorta, presenting at the ensiform as a pulsatile, elastic tumor, even giving a systolic murmur on auscultation. The diagnosis is usually made postmortem or by exploratory incision as there is nothing characteristic in the history by which the exact pathological condition can be differentiated from malignant growths in other organs. In our present state of therapeutic helplessness in inoperable carcinoma there is nothing that can be done for these cases.

HERNIA IN CHILDREN

When a baby is born with a hernia the gut may be readily returned to the belly by holding the child up by its feet. The nurse then should firmly press over the internal ring so that as the baby is returned to the level neither intestine or omentum can drop into the funicular process of the peritoneum. Then a pad must be fixed firmly over the inguinal canal by means of a roller-bandage or by a broad band of adhesive strapping; or a well-fitting truss is still better. The child's legs must be tied together, and he should be hung up with head and shoul-

ders just resting on the pillow and kept so for two weeks. If the parents object to this plan the child may be attached to a small stretcher, which can be tilted so as to keep his head always low. The child's intra-abdominal pressure must be reduced if one is to arrange for the permanent return of the prolapsed bowel without operation. As distension of the bowel is a source of annoyance especial care must be taken to feed the

baby regularly and to keep the bowels open by use of compound syrup of senna or the rhubarb and soda mixture. Above all things sugar-teats, rubber "comforters" and the like are to be forbidden as they invariably lead to meteorism. If these measures do not result in cure radical operation may be done, the wound being sealed by collodion, carefully, to prevent infection from the urine and fingers.

GYNECOLOGICAL THERAPEUTICS

CYSTOCELE

It is hard to make the average doctor remember that cystocele means ruptured perineum. The skin may be unbroken; but if the two index-fingers be introduced within the vulva and traction made downward and outward it will be seen that the pelvic floor gives no support whatever to the structures above it—it stretches like so much rubber: all of the muscles having been torn across and the margins widely separated. While an anterior colporrhaphy is indicated it is valueless unless a close perineorrhaphy be made at the same time, extreme care being taken to secure a thick muscular floor of the pelvis, a thick perineum.

A LIVING CHILD IN EXTRAUTERINE PREGNANCY

In ruptured tubal pregnancy, when the woman has passed the fourth or fifth month before the diagnosis is made, if everything seems to be well both with mother and fetus, it is perhaps advisable to permit gestation to progress to full term before operating in order to secure a living child. Besides, the placenta will come away much more readily when at maturity. Many children have been saved in this way and the mother does not suffer any great added danger by the delay. Sittner's careful analysis of all recorded cases showed that the fetus is more or less deformed in about half the cases,

though not so seriously as to interfere with viability. The deformities were impression of the skull, facial paralysis, contracture in the elbow, luxation of the hip-joint or torticollis.

Study of this material and of hundreds of other cases in which the ectopic fetus died before operation shows that the sac ruptured in 7.4 per cent. The rupture of the sac and separation of the placenta occurred during the later months of the pregnancy in some few cases, but neither so frequently nor with such serious consequences—at least when the patient was under clinical supervision—as to justify disregard of the life of the fetus from fear of these complications. General or local disturbances of a milder nature are extremely frequent with ectopic pregnancy (recurring hemorrhage, pains from dragging of adhesions, displacement of the viscera and peritoneal inflammation). If they exhaust the woman, the fetus should be disregarded and immediate operation performed. In numerous cases the ectopic pregnancy progressed without any disturbances, and in the majority the disturbances were so mild or bearable that the operation could be postponed out of regard for the child.

Some women refuse to believe that their pregnancy is ectopic. The general opinion is in favor of trying to save two lives instead of one, especially as the sudden catastrophes become comparatively rare after the fifth month, and as any aggravation of the con-

dition can be promptly remedied by immediate intervention if the woman is kept under observation.

PROLAPSE OF THE OVARY

Of this sometimes troublesome condition—distressing on account of the dragging sensation in the pelvis and of the likelihood of traumatic injury in the cul-de-sac during copulation, etc.—it may be said: Some cases are associated with but trifling symptoms, the organ not being inflamed; such are best left alone. In most instances prolapse is accompanied by tenderness, pain, discomfort; such patients must have the ovaries suspended by proper suprapubic operation. Most retroverted uteri have prolapsed ovaries behind them. Failure to recognize this and correct the displacement when the retroversion is cured leads to an unsatisfactory result, with blame of the doctor.

Mere shortening of the infundibulopelvic or ovarian ligament will be followed by recurrence; doubling of the ligament into a fold may cause obstruction to the circulation in the ovarian veins and thus increase the varicosity of the pampiniform plexus, with increase of suffering; hence the best operation is to elevate the ovary and put it in front of the margin of the broad ligament, fastening it with a few sutures. This anti-ligamentous fixation does not interfere at all with menstruation or pregnancy. It may be combined with shortening of the round ligaments or reefing of the broad ligaments for the cure of retroversion.

PHLEGMASIA ALBA DOLENS

With the general adoption of thorough antisepsis in obstetric practice "milk-leg" (phlegmasia alba dolens, or thrombosis of the veins of the leg and thigh) has become comparatively uncommon. Yet mild infection still often does occur in spite of presumed care in the aseptic technic, and whenever the puerperal woman carries a temperature above normal there is more or less danger of thrombosis. There can be little doubt that the tendency to coagulation

of the blood in the saphenous, femoral or iliac vein is increased by inactivity of the liver, one function of which is to oppose undue coagulability of the blood. Hence the old practice of giving a good dose of calomel just before or during labor was pretty good treatment; the modern method of administering a purgative immediately after delivery being also commendable. There can be no question that if more attention were paid to careful evacuation of the bowel during the last weeks of pregnancy venous thrombosis would be less common; and if, with this, ideal asepsis were maintained during and after delivery the trouble would practically disappear from obstetric work.

PRURITUS VULVÆ

Some cases of pruritus vulvæ are promptly relieved by the use of pilocarpine. It is to be administered internally in doses of one-eighth to one-fourth grain every three or four hours until relief is obtained.

NEUROSES OF THE ABDOMINAL SYMPATHETIC

Certain women who reside in malarious districts complain of obscure abdominal symptoms which may lead to a diagnosis of organic disease if it be forgotten that irritation of the abdominal sympathetic (the solar plexus and its associated nerves) may result from chronic poisoning due to the presence of the plasmodium malarie in the blood. The most frequent type is characterized by indefinite neuralgic pain in the abdomen, with functional disturbance of the organs receiving many filaments of the sympathetic. In other cases splanchnic irritation may cause disturbance of the plexus of the heart and lung, giving rise to palpitation and arrhythmia, dyspnea, false angina pectoris, together with an alarming throbbing of the abdominal aorta just above the umbilicus, all accompanied by dyspnea. Still others have vasomotor disturbances, urticaria, vague neuralgias (especially of the pelvis) without discoverable organic lesions as the cause. All

of these symptoms may promptly vanish on administration of two Grams (30 grains) of quinine in one day, followed by use of two decigrams (3 grains) three times a day in combination with arsenic in doses of two milligrams (gr. 1-30) and some mild laxative.

OVARIAN HERNIA

Very rarely an ovary will be found in the sac of an inguinal hernia; more often in that of the femoral variety. This abnormality has been noted more often in very young patients, the ovary generally being in a state

of cystic degeneration. If the ovary be healthy it must of course be pushed back into the abdominal cavity together with the loop of gut or mass of omentum which has accompanied it through the hernial opening. In the cases of incarcerated hernia, however, great care must be exercised not to put back an ovary in which the circulation has been so obstructed that gangrene may follow—a precaution doubly essential in strangulated hernia. In case of doubt, just as with the thrombotic omentum, the suspected ovary should be removed and the rupture cured by appropriate suturing.

GENITOURINARY THERAPEUTICS

FOR ORCHITIS

This application to the testicle may be made with great relief during the first week of inflammation:

Guaiacol10.0 (drs. 2 1-2)

Lanolin64.0 (ozs. 2)

Mix well, and rub in gently twice daily; envelop the testicle in nonabsorbent cotton and suspend. After a week it is better to change to:

Mercurial ointment.....4.0 (dr. 1)

Belladonna ointment.....4.0 (dr. 1)

Ichthyol4.0 (dr. 1)

Lanolin4.0 (dr. 1)

Make an ointment and apply three times a day, using a suspensory bandage not very tightly applied.

CURE OF RENAL TUBERCULOSIS

Lately a number of cases of tuberculosis have been reported apparently cured by the use of the Roentgen-rays. Under the influence of the x-radiance the urine soon cleared up and tubercle bacilli could no longer be detected in the sediment although in both cases the process had already extended to the bladder. It is probable that the rays stimulate connective-tissue formation, leading to an encapsulation of the tubercu-

lous foci. The method is indicated, of course, only where a radical surgical procedure is no longer feasible.

CYSTITIS IN BABIES

The opinion is gaining ground that cystitis is rather common in young children, even nurselings being often infected, the source of the trouble being the same as in adults: gonorrhea, catheterization, etc. Caccia, who has studied the subject carefully, says it may result from fever, profuse diarrhea, cold, uricemia, arthritic diathesis, poisons, urinary stasis, and tuberculosis; from the gonococcus, and from other bacterial agencies, especially the bacillus coli communis. In female children these germs may be introduced from the vagina; in males when phimosis exists. In this case the infection is ascending. It is not probable that it often is of hematogenous origin. The symptoms are pain, fever, nocturnal enuresis in cases in which the pain causes the urine to be withheld during the day, turbid, acid urine, containing agglutinated leukocytes and bacteria, odorless, and with small amount of albumin. The disease when not treated generally is cured spontaneously after a time, so that the prognosis is good. The therapy is the same as that for adults; dosage to suit age.



SPARTEINE: A CLINICAL STUDY

A description of this valuable cardiac remedy,
gleaned from two French authors, outlining its
pharmacologic properties and therapeutic uses

SPARTEINE is the alkaloid of spartium scoparium, a papilionaceous legume. Its chemical history was made up by M. Houdé, while the better mode of isolating the alkaloid is also due to him. Its physiology was studied by Laborde and upon its properties thus indicated Germain Sée introduced it into practice where it has redeemed all the promises its physiologic properties gave reason to expect. Hence sparteine is a remarkable confirmation of Gubler's axiom that therapeutics ought to be a corollary of physiology. It is a liquid denser than water, colorless, quite volatile, of bitter taste, and of an odor which reminds one of that of pyridin. It becomes brown in the air. It is soluble in alcohol and in ether but not in water.

Sparteine combines with acids to form easily crystallizable salts. The sulphate forms particularly large transparent rhombic crystals which are very soluble in water. It is the only sparteine salt employed in therapeutics.

One kilogram (2 1-5 pounds) of the plant yields about 3 Grams (45 grains) of sparteine, by Houdé's process. Its formula is $C_{30}H_{20}N_2$.

Physiological Properties.—According to Laborde the main characteristic property of sparteine is an energetic stimulating influence on the heart, the pulsations of which it regu-

lates while augmenting the energy of the cardiac contractions very rapidly. It possesses a dynamic action over the heart, which is essentially of central origin, with the additional proper action on the intracardiac system of ganglionic nerves.

Four essential points characterize the physiologic action of sparteine: (1) Rapidity of action; (2) augmentation of energy, which it imparts to the heart; (3) regularity, which it induces in the contractions of that organ; (4) the absence of any effect upon blood-pressure, which it neither raises nor lowers.

The rapidity of the action of sparteine is such that it begins to manifest itself within fifteen or twenty minutes, and frequently even sooner, after its administration.

The increase of cardiac energy from sparteine is such that a pulse-curve tracing taken from a patient with an advanced valvular heart disease, while under the influence of sparteine, will scarcely differ from the tracings produced by a normal heart.

The regulation of the heart's pulsation by sparteine shows itself in more ways than one, according to circumstances. If the pulse-rate is below normal, sparteine will cause acceleration, but if above normal, it will bring it down to normal. Sparteine therefore rightly merits the qualificative designation of "cardiac metronome" which Laborde gave it.

The negative quality of sparteine, that of being indifferent to the pressure of the blood, neither increasing nor diminishing it, is recognized by all who have experimented with the remedy. This universally recognized quality is of great importance in therapy, and it is mentioned because precisely on account of this indifference it will have the preference in certain cardiac affections over other remedies.

This so remarkable action of sparteine upon the heart alone is still more remarkable on account of its intensity and persistence, since experiments on frogs show that the cardiac contractions actually continue even after the death of the animal and when its body is already beginning to stiffen. No other substance shows anything like such effects. The same results are obtained in experimenting with newly born dogs.

The results obtained show, moreover, that the action of sparteine is exerted directly on the muscular fibers of the heart, or rather on the intracardiac ganglionic apparatus, and in either case the action of sparteine is directly upon the heart without the intervention of the central nervous system. And this latter fact is most valuable in certain grave conditions of the patient when that system may be nearly incapable of reacting to the remedy or of transmitting to the heart the impressions made by the remedy upon that system.

After Drs. Laborde and Legris had studied experimentally the physiologic properties of this remedy, and since Dr. Germain Sée applied it clinically, the physiologic facts of this remarkable remedy here given induced other investigators to study sparteine and thus secured for this remedy a specially marked place in the materia medica.—*Revue Therapeutique des Alkaloids*, June, 1908.

[After finishing the translation of the above there came to hand another French article on sparteine which seems too good to withhold from our readers.—THE GLEANER.]

G. GARSONNIN'S ARTICLE ON SPARTEINE

Broom, spartium, a papilionaceous legume, is found in all parts of the world, but principally in arid silicious soil which it

cheers with the golden color of its flowers. The natives of the Sahara desert dress snakes with a decoction of pounded twigs of the broom.

The various species of spartium differ as much in appearance as in properties, and it is best to know something of each of them before we learn what we want of spartium scoparium.

1. *Genista tinctoria* (dyer's broom) contains in its tops a coloring principle. The entire plant has purgative properties, and its fruit is emetocathartic.

2. *Spartium purgans*. Its name indicates its principal property and distinguishes it from its congeries.

3. *Genista juncea* (Spanish broom) is a Spanish ornamental and odoriferous plant, of a sweetish taste and containing cystisine, whose toxic properties became known from its use as a substitute for spartium scoparium in a certain medicinal compound. The juice of Spanish broom given to an animal in small doses will produce feebleness, dyspnea, rarely also convulsions, but always trembling. In larger doses it will produce convulsions, trembling, spasms and vomiting.

4. *Spartium scoparium*. (Broom, broom tops.) The odor of the flowers is the opposite of that of the preceding species and is very disagreeable; their taste is bitter. The twigs and leaves have purgative and diuretic properties. Stenhouse, in 1851, isolated scoparine from spartium scoparium, and following this Mills and Bernheimer separated from it sparteine.

Scoparine has the formula $C_{20} H_{20} O_{10}$, forms yellow crystals, and has diuretic properties.

Sparteine has the formula $C_{15} H_{20} N_2$. It is derived from the mother-liquor from which scoparine has been crystallized. It is an oily liquid of penetrating odor and bitter taste. It forms a number of salts of which the sulphate is the most stable and the only one used in medicine.

Antidotes are emetics and tannin.

Physiologic Action.—Laborde studied out the sulphate salts and determined its action on the heart. Lewin observed that sparteine paralyzes the spinal cord, the motor-nerves

of the heart, and the inhibitory centers of the heart. In doses of 15 to 20 centigrams (2 1-2 to 3 1-3 grains) given to a warm-blooded animal it provokes difficulty in co-ordination-movements, somnolence, at first accelerated then dyspneic respiration, irregular heart-beat, convulsions, and death from paralysis of the respiratory centers.

The entire plant given to a human being provokes nausea, vomiting, diarrhea, palpitation, vertigo and headache.

Germain Sée, who applied sparteine sulphate to the treatment of cardiac affections, says of it:

1. It relieves the heart and pulse. It has a tonic action infinitely more marked, more prompt and more permanent than digitalis.
2. It has an immediate regularizing effect upon the rhythm of a troubled heart.
3. It accelerates the movements of the heart.

According to Richaut, however, it was noticed that although sparteine sulphate does accelerate the heart's movements and raises its energy, still it cannot regulate its rhythm when it is disturbed. Sparteine, therefore, according to this investigator, is neither an angiotonic nor a cardiotonic strictly comparable to digitalis; it can be preferred to the latter with benefit during the period while compensation is still being restored, or to replace digitalis when it has put things in order, but sparteine can not substitute the latter drug beneficially in a period when arrhythmia is confirmed.

Pouchet states that sparteine relieves the pulse and heart, regulates cardiac rhythm, and accelerates the heart-beat at least in a transient way. The effect is noticed half an hour after ingestion and lasts for three and four days after treatment was stopped. Its action on arterial tension is *nil* and the vasomotors are not influenced by it. Sparteine continues and reinforces systolic impulses subsequent to the action of digitalis. Phenomena of accumulation are not noticed while it is being used.

The elimination of sparteine is easily effected by the kidneys even in patients with nephritis, and this makes it a valuable medicament in a great number of conditions,

above all, cardiac cases. It possesses practically no diuretic action, but it *can* prolong a diuretic action previously effected.

The rapidity of sparteine-action is valuable in cardiopathic cases requiring prompt intervention to prevent asystole. Moreover, even an exaggerated dose does not present near as much trouble as most cardiac medicaments do.

Sparteine would therefore, according to Pouchet, be most efficacious in recent cardiac affections while compensation is still maintained and degeneracy is but slight. Its indications comprise all cases of asthenia with an altered myocardium or an insufficient one, and where pulse is irregular, intermittent and arrhythmic.

According to this author the *entire plant* has a marked diuretic action owing to the scoparine it contains.

Guinard, Mollière and Vinay have used sulphate of sparteine locally applied to the skin and mucous surfaces in erysipelas, scarlatina, variola and measles, in which they had splendid results, especially in erysipelas, the remedy acting anesthetically locally and regulating the temperature at the same time, either elevating when too low, or lowering when too high.

The dosimetric granules of sparteine sulphate contain one centigram (gr. 1-6) each. The usual dose for an adult is from 5 to 10 granules a day. According to Burggraef it can be given up to 20 granules, i. e., 20 centigrams (3 1-2 grains) a day.—*La Dosimetrie*, July, 1908.

[According to Pettey, writing in this journal (Nov., 1905), the dosage of sparteine usually employed is altogether too small. Dr. Pettey uses it even up to 2 grains every two or three hours.—ED.]

TOBACCO AND ITS ALKALOIDS

Three species of *nicotiana* are the sources from which all forms of tobacco are derived, namely, *nicotiana tabacum* (Virginia tobacco); *nicotiana glauca* (Maryland tobacco); *nicotiana glauca* (Maryland tobacco); *nicotiana glauca* (Maryland tobacco). Nicotine, its alkaloid, is contained in tobacco leaves in very various quantities, from six-

tenths of one percent up to six percent. The leaves of tobacco are subjected to a process of fermentation before they are used and also soaked with some material. In the preparation of snuff the natural nicotine is reduced to about one-third. In chewing tobacco the nicotine is reduced still more. Pipe tobacco mostly contains much less nicotine than cigar and cigaret tobacco. The annual consumption of tobacco in Germany amounts to about 200,000,000 pounds. In the United States it is about 440,000,000 pounds.

The smoking of cigars and cigarets more frequently produces chronic intoxication than does chewing, owing to the actual presence of nicotine in the tobacco smoke. It has been argued against this that this nicotine intoxication is met with typically in those who smoke Havana cigars principally although that variety contains relatively the least percentage of nicotine. But while it is true that Havana tobacco does contain less nicotine than, say, German "palatinate," or American Virginia tobacco (and the nicotine-rich "Virginias" do easily produce intoxication), still Havana cigars do also contain on the average from two to three percent of the alkaloid, nicotine.

It is to be remembered that *connoisseurs* possibly smoke fresh, i. e., moist, Havanas, which implies that the nicotine contained in them passes over into the smoke. The nicotine is consumed, however, only at the point of burning and is destroyed, while in the portion immediately behind the fire the nicotine is distilled because there the temperature very rapidly decreases, and with the breath the nicotine is conveyed into the mouth. In dry cigars more nicotine is burned while in fresh moist, freshly imported cigars more nicotine is distilled and gets into the mouth.

For experimental purposes cigars were smoked by mechanical aspiration by means of a glass apparatus constructed for the purpose. From the tobacco smoke which was collected in acidulated water 50 percent of the nicotine that was contained in the smoked cigars was then recovered. When only the first half of a cigar had been consumed there

was a noticeably smaller content of nicotine in the tobacco smoke, and thus evidently the nicotine accumulates in the remaining part of the cigar—the "stump" or "butt." [When "THE GLEANER," many, many years ago, used to smoke, he concluded, and so expressed himself, at the time, that a good Christian should never smoke the last third of a cigar.]

Tobacco smoke contains also beside nicotine certain pyridin bases, ammonia, carbon dioxide and hydrocyanic acid, the latter in quite minute quantities, the former in considerably greater.

The injuriousness of tobacco is proportionate to its nicotine-content. Of the tobacco sorts the "heaviest" is the Virginia, having 6 percent nicotine. Cigaret tobacco generally is "heavy", especially when it is drugged with opium and hashish as the Oriental cigarets are. Pipe-tobacco is usually poor in nicotine, and besides, the longer the pipe-stem the less distilled nicotine reaches the mouth, being condensed before that and forming what the Germans call "pfeifenschmergel," that is, pipesmear.

In the old East where the water tobacco pipe, the nargileh, is used, there chronic tobacco poisoning, tobacco amblyopia, is totally unknown. Various attempts have been made to manufacture nicotineless cigars. This can be done by leaching out the cured leaves with alcohol or with water containing ether. But a cigar without nicotine has no real attraction for the smoker. To free the tobacco-vapor from nicotine it is recommended to insert into the mouth-end of cigars and into pipe-tubes plugs of cotton moistened with or impregnated with tannin or citric acid.

SECACORNIN

Secacornin is a sterile solution of the alkaloids of ergot, of which one cubic centimeter (about 16 minims) is equal to four Grams of *secale cornutum*. It is given as an ergot preparation in doses of from a half to one cubic centimeter internally, intramuscular and also intrauterine.—"Enzyklop. d. Praktisch. Medicin." Lieferung 18.



LACTIC-ACID FERMENTS AND PUTREFACTION

A study of recent work on intestinal fermentation and putrefaction, especially with regard to the influence of the *bacillus bulgaricus* in aiding in the control of these conditions

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METCHNIKOFF'S "Nature of Man," his "Essais Optimistes," and "Quelques Remarques Sur Le Lait Aigre," and similar communications from other authorities, together with the astonishing facts as to the age attained by those races largely using preparations of sour milks, have brought the matter to the attention of the medical profession and general public of all countries. A review of the subject therefore is interesting, especially in view of the number of commercial lactic ferments which are now being brought to notice.

Dr. Gardette (*International Therapeutics*, 1906) says: "Normally, the intestine abounds with a microscopic flora composed of saccharolytic bacilli which act chiefly on the carbohydrates. Under certain conditions these saccharolytic bacilli are diminished in number and are replaced by the proteolytic microbes of nitrogenous putrefaction. This microbial substitution of antagonistic bacilli is the key to the etiology of intestinal auto-intoxication."

In this discussion the value of lactic-acid forming ferments as preventatives of auto-intoxication, arteriosclerotic changes and premature senility will not be considered at length. Suffice it to say that Metchnikoff's

reasoning is based on the fact that proteolytic bacteria proliferate in an alkaline environment with production of certain toxins, skatol, indol, etc., while Missier, Massol and Grigoroff have proved that the proteid-destroying bacilli are unable to flourish in an acid medium. We therefore have two methods at our disposal to combat intestinal auto-intoxication, viz., (1) by rendering the intestinal area acid (2) by introducing into the intestine bacilli directly antagonistic to those which attack the proteids.

The crude ferments which have been used for ages by Oriental races are very numerous: The best-known among these are the *maya* of Bulgaria, the *leben* of Syria, the *raiel* of North Africa, the *cioddu* of Sardinia, and the various ferments used in India for making *dalh*, all of which contain wild yeasts, bacilli and cocci which give rise to fermentation with formation of lactic acid. Some of these are positively harmful, such as the streptococcus, while others like the *bacillus subtilis* are harmless, and most of them fortunately appear to be unable to resist destruction by the gastric juice.

Herter, Metchnikoff, and Massol appear to have been the first to isolate and study the powerful Bulgarian bacillus which is able to reach the intestine and continue to prolifer-

ate in the intestine with production of lactic acid and inhibition in a great measure of the formation of indican by the colon bacillus and other proteid-destroying bacteria. This so-called "bacillus of Massol" persists in the feces for months in spite of the saprophytic bacteria with which it may come in contact. This is a great advantage, since according to Cohendy (*Archives de la Societe de Biologie*, No. 17, 1906) the bacillus *Bulgaricus* continues to proliferate for weeks in the intestine after cessation of the daily administration of fresh cultures, and so the prevention of putrefactive autointoxication is prevented once its growth is established in the gastrointestinal tract. That the indican index and other symptoms of intestinal putrefactive changes are arrested is maintained by Herter (*British Medical Journal*, Dec. 25, 1907), Puchou of Lausanne and others.

The specific lactic-acid ferments include a number of species, some of which convert all the sugar into lactose and others only a certain proportion. Some bacteria curdle milk, others do so only partially through the medium of enzymes such as casease, while still others produce gases, aromatic principles, etc., so that when we consider the variable sources and quality of milks and the conditions which the various lactic-acid ferments bring about it is easy to understand the great irregularities in the standards of the buttermilks of various countries.

Another very important point is the vitality of this Bulgarian bacillus in the presence of pathogenic organisms, since when cultures of typhoid, cholera and other bacteria are made in suitable media in conjunction with it, the bacillus of Massol alone is found to proliferate freely. This probably explains the impunity with which the mixed ferments such as maya, kefir grains, etc., containing as they do various pathogenic germs, are used, since the sour milk resulting from their use and the large amount of lactic acid resulting kills such dangerous microorganisms as the streptococcus. Piffard also found that the Bulgarian bacillus interfered with the growth of the bacillus typhosus, the administration of pure cultures of the Bulgarian bacillus of

Massol therefore would appear to be indicated in the treatment of the intestinal symptoms of typhoid fever.

This Bulgarian acid bacillus is optionally aerobic and anaerobic and seems to adapt itself to feeding on the alimentary carbohydrates, and while it produces immense quantities of lactic acid (2.8 p. c.) the human economy easily disposes of as much as 12 Grams daily when given by the mouth, this acid breaking up, like most organic acids, into carbonic acid and water, a fact easily explained by its chemical derivation from the hexoses. Tigersted states ("Physiology", page 297) that lactic acid is normally elaborated as a result of the action of the pancreatic juice and bacteria upon carbohydrates in the small intestine. Sour milk, owing to the presence of this vigorous bacillus, robs the proteid ingesta of its dangers, since putrefactive changes are delayed or inhibited and the uric-acid excess following faulty metabolism can thus be prevented.

Emerson (*New York Medical Journal*, Feb. 8, 1908) claims that not only is the process of carbohydrates and proteid disintegration occurring in the souring of milk with the Bulgarian bacillus greater, but the resulting lactic acid produced activates peptic secretion and digestion.

Lesage and Hayem long ago showed the useful action of lactic acid in cases of infantile diarrhea, enteritis, and even in cholera.

In Paris it is claimed that the administration of the lactic ferment by the mouth gives as good, if not better, results than when buttermilk is administered ready-prepared, and that milk need not of necessity be given at all.

It is important, however, that either the milk be inoculated with the biologically standardized bacillus or that special pure cultures only be given in tablet-form by the mouth, which will outgrow pathogenic and putrefactive bacteria.

As has already been pointed out, many pathogenic and nonpathogenic bacteria will proliferate in a neutral or even acid medium, even with production of lactic acid, so that a lactic-acid ferment cannot be used indis-

criminally, and here the difficulty is to select the ferments, since it is often impossible to differentiate them microscopically from harmless lactic-acid-forming bacteria. Many cocci and bacilli, such as *bacillus coli communis*, *bacillus oidium lactis* (which also forms butyric acid in addition), *bacillus prodigiosus*, the *bacillus* of Friedlaender, etc., not only give rise to lactic acid but simulate the rod-shaped bacilli of the Bulgarian *bacillus* isolated by Massol, and some of them may produce the extremely toxic tyrotoxin, while others are capable of actually destroying the proteids; so that impure cultures may do serious harm.

The true Bulgarian *bacillus* of Massol, however, is the only one yet known to produce succinic as well as lactic acid, and while it interferes with the formation of butyric acid and is unfavorable to the proliferation of some pathogenic cocci, bacilli and spirilla, it does not entirely prevent the growth of bacteria such as the *saccharomyces cerevisiae* and lactic-acid-forming *bacillus subtilis*, *bacillus oidium lactis*, etc.

The maya ferment used in Bulgaria, for example, besides three useful bacilli mentioned, contains certain yeasts and numerous other bacilli, some of which are certainly injurious.

"In order to obviate these inconveniences scientific selection should be made to replace these natural ferments, and the *bacillus* of Massol is therefore usually selected because it is the most energetic producer of lactic acid, besides being very resistant. It is found in practice, however, that this *bacillus*, when isolated, not only brings about the coagulation of milk but also attacks the fats, saponifies them too much, and communicates to the milk a disagreeable taste. Metchnikoff has found that this does not take place, however, when it is cultivated in company with another lactic *bacillus*. It is this principle which has been utilized for the preparation of "fermenlactyl," the selected lactic-acid ferment utilized in Paris."

Natural or boiled milk requires from six to seven hours for complete digestion, while, owing to the partial digestion of the casein and the conversion of a part of the fats by

the lactic ferments buttermilk needs only from three to four hours for complete assimilation.

To counteract the proliferation of pathogenic bacteria, yeast is largely used in the preparation of kumiss, zoolak, etc., and the presence of some few cocci does not of necessity give rise to the harmful buttermilk. In this connection it is well to quote from the report of Bertrand and Gustave Weisweller (*Annales de l'Institut Pasteur*, December, 1906,) of which the translation is as follows:

"The Bulgarian ferment acts with a different degree of intensity on the principal substances contained in milk. The Bulgarian ferment hydrolyzes nearly the whole of the sugar contained in the milk. It transforms, next, the glucose and the galactose resulting from this hydrolyzation into lactic acid. Next to the lactic acid (which easily attains 25 Grams per liter in volume) we find a little succinic acid (only about 1-2 Gram per liter) and a very small quantity of formic acid.

"This Bulgarian ferment is the first real lactic-acid ferment producing succinic acid. It is also the first example we have of a lactic ferment separating visibly the lactose before transforming it into an acid.

"The commoner, quick-growing ferments which sour milk on exposure to the air soon become exhausted and a totally different class of ferments soon render the milk alkaline. This is especially the case when pasteurized milk is used.

"In conclusion, therefore, we see that certain lactic-acid bacilli, when carried into the intestines along with our food, continue to decompose sugary and starchy food-stuffs into lactic and succinic acids, which in their nascent state are endowed with considerable activity against the bacteria of putrefaction.

"Clinical experience shows that these lactic-acid bacilli exert (a) a local action on intestinal lesions (tuberculosis, etc.); (b) an antiseptic action on putrefactive processes; (c) a reflex action on the liver and pancreas, the normal secretions of which are increased; (d) a general tonic action on the whole organism due to the lactic acid acting as such after reabsorption into the blood;

(e) since 1 Cc. of sour milk prepared with the bacillus of Massol may contain as many as 500,000,000 living bacilli, and the tablets of ferment lactyl immense numbers, it is only necessary to establish this bacillus in the intestine thoroughly, either by administering sour milk, or when this is objected to by the patients, the ferment lactyl tablets themselves, to continue the proliferation of a healthy intestinal flora, which needs but small daily additions of these active lactic ferments to maintain this desirable condition."

We see, then, the importance of selecting pure cultures of these lactic-acid ferments and of not being content with the "say-so" of commercial laboratories of the mere production of the coagulation of milk by alleged lactic ferments.

SOME STATE-JOURNAL EXPERIENCES

The story of the relation of the state journals to the attacks which have been made upon me by *The Journal of the American Medical Association* has not yet been told. It makes an interesting chapter. Let it be understood at the beginning that I have no cause for complaint against the majority of these journals. Most of them have been judicial in tone and fair in spirit—and that is all that I ask of any man or of any journal. But there is a small group of state medical organs which out-Herod Herod—which are not merely content to reprint the essence of any calumnious statements against us (or for that matter, anyone else) which may be made by the national association *Journal*, but which embellish and "improve upon" the original, purely from the sensation-lighted recesses of their own imaginations.

It was a remarkable thing that immediately following the various assaults upon me and my products in the *J. A. M. A.* this small coterie of state journals gave voluminous space to them in their own columns, reprinting in part or abstracting freely, but assiduously refraining from publishing anything which might be favorable to me or the interests with which I am identified. And how quickly they got "copy." (There

is one exception, which will be referred to later.) This was well exemplified by *The Journal of the Texas Association*, which in its February number gave a page and a half of finely printed matter to an abstract and reprint of the *J. A. M. A.*'s attack upon the H-M-C compound, while my five-page reply, printed in the national journal, was condensed into twenty lines—including things which I did *not* say! I wrote Dr. Chase, editor of the Texas journal, answering the article printed in his magazine, calling attention to the discrepancy between the amount of space devoted to the assault and to my side of the controversy, and asking for fair play. Did I get it? Not much! My letter was not even acknowledged.

Following the article of March 14, in the *J. A. M. A.*, the one in which Editor Simmons went out of his way to make an attack upon me personally and upon The Abbott Alkaloidal Company, several organization journals commented at length, editorially, upon these "exposures." Without exception these comments were unjust and unfair—even less just and less fair (as is usually the "me-too" of consecrated ignorance of fact) than the original article.

There was not a suggestion that we might be even partially in the right. In other words, they were simply supportive of the *J. A. M. A.* and apparently intended to advertise the *Journal* article, so that no one should overlook it. To all intents and purposes these journals were acting in unison with the national organ in its campaign of destruction. Whether this was according to an arrangement which had been previously "framed up" I do not know; but the facts lend color to the suspicion.

The journals which made these editorial attacks upon me and the enterprises with which I am connected are *The Journal of the Indiana State Medical Association*, *Colorado Medicine*, the organ of the Colorado State Medical Society, *The Journal of the Michigan State Medical Society*, *The California State Journal of Medicine*, and *The St. Paul Medical Journal*, organ of the Ramsay County Medical Society. Letters of reply were sent to all, except the California journal.

From only one of these did we get any satisfaction. This was the Michigan journal, and to the editor of this publication, Dr. Schenck, I here express my earnest appreciation. If he is not friendly to us he is at least fair. A reply to his editorial by Dr. W. T. Thackeray appeared in the June number of his journal, and was reprinted in CLINICAL MEDICINE last month.

Our experience with the other journals mentioned will be shown in the correspondence which we print below.

The Indiana Medical Journal, in its number for April 15, 1908, devoted a little more than a page to the editorial "exploitation" of the article in the *Association Journal* of March 14, to which I have just referred. This consisted of one long editorial and two short editorial items. In the main these editorials, so-called, were repetitions of statements made in the national *Journal*, largely in the form of exact quotations. In addition, the editor of the Indiana publication speaks of the "frauds" and "deceptions" practised by The Abbott Alkaloidal Company and of the "unreliability of its claims." He accuses me of "working" the medical profession, and intimates that we are "deceiving and defrauding" its members for our "own financial gain."

Assuming Editor Bulson to be a fair man and that he would put the whole matter squarely before the readers of his *Journal* by publishing our side of the story, writing him under date of May 8, we submitted the following reply for publication in his journal:

To the Editor of the Journal of the Indiana State Medical Society:

My attention has been called to the editorial notes in your journal for April 18th attacking The Abbott Alkaloidal Company, thus borrowing and lending new reverberation to the thunder (?) of *The Journal of the A. M. A.* You compliment the *Association Journal* upon giving publicity to these facts and exposing the "frauds" in connection with The Abbott Alkaloidal Company. Now, Doctor, why not be more specific? To what frauds do you refer? This is a serious word. If you refer to our bonds, we can answer that not one of the men who hold these bonds is making any complaint or has shown any fear of "fraud." Everyone who has invested in them is receiving a larger rate of interest from his investment than he can from almost any other security. We are paying today 7, 8, and 9 percent according to the series

of the doctor's holdings, and shall continue to pay this or better unless these underhanded methods prevail. No man who has asked for his "money back" has failed to receive it in thirty days. Where is the fraud in this? Do you know of another form of investment upon which so high a rate of interest or so liberal offers of repayment are obtainable?

Furthermore, in spite of statements made by *The Journal of the A. M. A.*, it is a fact that no misrepresentation whatever was practised in "exploiting" these bonds. Every purchaser was given the absolute facts. If he read our letters and literature, he understood the character of the investment he was making, and that the bonds, so-called, were in reality call loans. This very fact gave them an advantage, that of cash realization at any time, which many men have been quick to appreciate.

It became necessary for the Company in the construction of its new plant building, to negotiate a loan. Inasmuch as the building was to be temporarily occupied by other parties, the mortgagee, from an exercise of overcaution, required that the mortgage be made by an individual in order to remove any question as to the right of a corporation to own real estate which it was not using. To overcome this objection the Company conveyed the property to me; and I have held the title, not as owner, but in effect as trustee.

I have no claim and have never made any claim to the property. The property belongs to The Abbott Alkaloidal Company, and I shall reconvey it as soon as the loan is paid. [This has now been done, as planned months ago.—W. C. A.]

If by "fraud" you mean our statements concerning the H-M-C I want to call your attention to an article by Dr. Wendell Reber in *The Journal of the A. M. A.* for April 25. In this article (which by the way was read before the Section of Ophthalmology at Atlantic City nearly a year ago, and in whose discussion you, Mr. Editor, participated) our position concerning the non-identity of action, pharmacodynamically, of hyoscine and scopolamine is sustained at every point. Dr. Reber tested these two alkaloids upon the human eye, most sensitive of organs, and yet, for maintaining this very fact of non-identity we have been sneered at, vilified and abused by the J. A. M. A. and its satellites—and all this time it (*The Journal*) had Dr. Reber's paper! Whose is the fraud? [Editor Bulson in his remarks upon Dr. Reber's paper, coincided in the latter's opinion that hyoscine is more active than scopolamine!—Ed.]

The Journal of the Indiana State Medical Association should represent the profession of the entire state, not a fragment of it, and as such it should give the truth and the whole truth. The Abbott Alkaloidal Company has many hundreds of customers in Indiana, all of whom have confidence in our work and know that it is true, right and just. Why not seek to learn *their* opinion of us? They are the men who know us best. All that we ask is fair play, fair play from your journal as from every man.

If you desire any facts about our work we will give them to you. We are just as anxious as anyone possibly can be to eliminate the errors, both of judgment and fact, that may have crept into our work. Any suggestions to that end will be not only respectfully but gratefully received. We insist,

however, that it is not "on the square" to publish these venomous, one-sided, unfair and defamatory paragraphs before the whole story is known. It is hard to "warm up" in a friendly way to those who are doing their utmost to destroy us. Were a willing to rest our case with the manhood of the profession of Indiana. From your journal all that we ask is fair play.

Very truly yours,

W. C. ABBOTT.

Was this letter of mine published in *The Journal of the Indiana State Medical Society*? No, it was not. Furthermore, Editor Bulson did not even acknowledge its receipt. I, therefore, wrote him again, under date of May 21, as follow:

Dear Doctor Bulson:

I sent you under date of May 8 a reply to the editorial appearing in your number of April 18, attacking The Abbott Alkaloidal Company. I have not yet received a reply to my letter and shall be pleased to know if you purpose to use the letter which I submitted, and if so, when. Kindly advise me at once. This is important.

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I have never received a reply to this letter. This is the way the "square deal" was given us by the Indiana organ. Surely a "lemon."

Now for our experience with another state medical journal. In the April number of *Colorado Medicine*, the official organ of the Colorado State Medical Society, there appeared a long editorial upon "The Abbott Alkaloidal Company" occupying about a page and a half nearly at the beginning of the journal. Like his Indiana editorial brother, Dr. Moleen, editor of *Colorado Medicine*, quotes largely from the article in *The Journal of the A. M. A.* He also refers to the controversy over H-M-C and gives a nasty little poke at Dr. Shaller, the well-known author of Shaller's "Guide" and a resident of Denver, now engaged in mining activities in that city. Nearly all of the remainder of the article consists of direct quotations from *The J. A. M. A.* Under date of May 8 we wrote to Dr. Moleen and submitted the letter, which follows, for publication in his journal, in the following words:

I hand you enclosed herewith a reply to your recent editorial attack upon The Abbott Alkaloidal Company which appeared in your issue of April. As a matter of simple justice to ourselves, and that your readers may have at least a glimpse of the other side of the case, I request that you give it space in your next issue. Do not change in any particular.

The formal answer, as submitted, was as follows

To the Editor of *Colorado Medicine*:

I have been surprised to read the editorial in your April number "Concerning The Abbott Alkaloidal Company," and I am sorry indeed that you have seen fit to spread before the physicians of your state the unfair and misleading statements contained in the article published in *The Journal of the American Medical Association*, March 14.

The most charitable view I can take of your editorial is that you have yourself been deluded as to the character of the work we are doing and our relation to the physicians who have used our products and bought our bonds. We have not and never have had any secrets from the medical profession. We have endeavored always to tell the exact truth and delude no one. So far as we know the men with whom we have dealt have been and are satisfied. No complaint comes from them. The wild outcry raised against us is not participated in, even in the slightest degree, by the men who have dealt with The Abbott Alkaloidal Company either as customers or bondholders. Those who are doing their utmost to destroy us have never seriously investigated the character of our work or the honesty of our dealings, and not one of them has a personal cause of grievance against us. Why, then, this assault?

As you intimate, the H-M-C tablet has been the center of attack; and, as you say, "the principal difficulty here was from the claim that hyoscine was not identical with scopolamine, which has been used for some time abroad." With regard to this point, we have received support from an entirely unexpected source. If you will read carefully an article by Dr. Reber in the number of *The Journal of the American Medical Association* for April 25, you will see what I believe to be incontrovertible evidence that our statements were accurate in every particular. Dr. Reber shows that in ophthalmic work hyoscine is about 50 percent more potent than scopolamine of the same source of manufacture (Merck) and the same strength (optical rotation of -20). A 1-10 percent solution of each drug was used in the eyes of several persons having normal eyes; he shows conclusively that both as regards pupillary dilation and accommodation the hyoscine salt was much more powerful than the scopolamine. I want to urge you to read this article carefully. If you admit for one moment the slightest pharmacodynamic difference between these two alkaloids the whole argument of our opponents breaks down absolutely.

In your editorial you quote the authority of E. Schmidt, the man whose work is most cited by those attacking us. Dr. Reber shows that Schmidt was the man under whose influence the theory of identity found expression in the German Pharmacopoeia. From thence it was adopted in the United States Pharmacopoeia; in other words, this idea of the absolute identity of hyoscine and scopolamine is a one-man dictum. We dissent from it, as we have the right. Our opinions are supported by clinical evidence, built upon thousands and thousands of cases. The work of Dr. Reber supports us. You should present these facts to your readers.

Regarding cactin, the last word has not been said. I would suggest, however, that in the in-

terest of fair play you reproduce our statements concerning the mode of manufacture and the history of this remedy, published in our answer to the attack upon us in the *Journal of the Association* under date of January 18. As to its therapeutic value more evidence, supported by carefully made sphygmographic tracings, will be forthcoming later. [See Dr. Butler's article, this issue.—Ed.] We have an abundance of reports from physicians testifying to its worth, and we can see no good reason why the testimony of hundreds of reputable practitioners, based upon clinical experience with men and women, is not of as much value as the limited and uncertain experiments of Hatcher and Matthews upon animals.

The attack upon our business is likewise unfair. It is peculiarly unworthy of a medical journal of high standing like your own, because it lends your influence to an assault upon the financial integrity of a pharmaceutical house which thousands of physicians are ready to testify has done more to advance the cause of therapy than any other single factor in our country. As we have already said, not one of the men who have used our goods and adopted our methods, has joined in this charge of falsehood and deceit. The men who know us stand with us. The men who are attacking us are those who do not know us.

I note your attack upon Dr. Shaller. Dr. Shaller is competent to speak for himself, but it seems to me that few of your readers will approve of methods like these. He is an honorable gentleman, and for many years was an able and honored practitioner of medicine. At one time he held a chair in a Cincinnati school of medicine. Few men have had greater success in our profession or are better fitted to help others than he is. The fact that he has given up active practice and gone into mining work is, I believe, no stigma upon his character or evidence of his lack of ability. Pardon me, Doctor, but I believe that Dr. Shaller is just as competent as yourself to give instruction in matters of therapeutics. Is it not possible that he is even more competent?

The final paragraphs quoted from *The Journal of the A. M. A.* are very pretty, but they conceal a fallacy. Our business is a clean business and our work is honorable, straightforward and intended to uplift. We believe, and so do those who hold our bonds, that any man who participates in this work is helping along a good cause. The degree to which his interest in our bonds might "warp his judgment" is shown by the fact that on a hundred-dollar investment a bondholder would have to use about \$100.00 worth of our goods to add to his profit \$.0015 therefrom! Or on a prescription costing the doctor \$1.00 his bond-earning would be the enormous sum of \$.000015! Is there any man fool enough to put in jeopardy his own reputation and the lives of his patients to make the minute fraction of a mill in this way? The thing is absurd upon the face of it.

The fair and the square thing in a case of this kind is to present both sides fairly to your readers. Would it not have been better before publishing this editorial to have made an effort to find out the exact truth, to learn our side of the story? Is it or is it not the mission of an official medical journal to endeavor to destroy the business of a pharmaceutical house whose methods for unexplained

reasons are objectionable to the few standing high in the councils of the profession, while they are warmly approved by many of the rank and file? I put it up to you.

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effort, so far as we can ascertain, was made to find out our side of the case. The entire article was an *ex parte* presentation, an assault upon us, nothing more nor less. Is it the function of the editor of an "official organ" to use its power to destroy one whom he dislikes? Should he not rather seek to learn all the truth and present it fairly, without bias, to his readers?

The attack of the *J. A. M. A.* and your own are the more remarkable in that, so far as we know, no holder of our bonds, to which you principally object, has ever made a complaint of unfair dealing or deception on our part. The character of these bonds was carefully explained to every purchaser, in every detail, and not the slightest misrepresentation was indulged in; not a single purchaser of these securities has ever charged us with such misrepresentation. The interest upon them has been paid promptly, and every man who has asked for his "money back" has received it within the days provided for on their face.

Moreover, the transfer of the property by The Abbott Alkaloidal Company to myself was a legitimate business transaction carried through, under legal advice, not for my own personal benefit, but in the interest of The Abbott Alkaloidal Company.

It became necessary for the Company, in the construction of its new plant building, to negotiate a loan. Inasmuch as the building was to be temporarily occupied by other parties, the mortgagee, from an exercise of overcaution, required that the mortgage be made by an individual in order to remove any question as to the right of a corporation to own real estate which it was not using. To overcome this objection the Company conveyed the property to me, and I have held the title, not as owner, but in effect as trustee.

I have no claim and have never made any claim to the property. The property belongs to The Abbott Alkaloidal Company, and I shall reconvey it as soon as the loan is paid. [It is done.—W. C. A.]

The Abbott Alkaloidal Company has never "buncoed" anyone, as you try to make it appear. Your inferences are false and your statements unfair. One of the most absurd of these statements in your editorial, one which is absolutely untrue, is that "among the liabilities of the Ravenswood Bank were listed \$100,000 of these bonds." This is so absurd that it hardly deserves comment. The Bank never had any of these bonds and the Company had no connection whatever with the Bank except in the usual line of business.

The only thing which has impaired or can impair the safety of those bond investments are attacks like those in *The Journal of the A. M. A.* and your own. That this is a fact you should fully appreciate. The open assaults of the organization journals and the quieter, more insidious, under-the-surface attacks of a certain great rival house, which are being made synchronously, are the chief source of danger to the holders of our securities. At present our bondholders are receiving 7, 8 and 9 percent on their investments.

One point more: I want to call your attention, and that of your readers, to an article in the *J. A. M. A.* for April 25, by Dr. Wendell Reber of Philadelphia, who shows by tests of hyoscine and scopolamine upon refraction in normal individuals that these alkaloids are not identical in action. It is

upon this point that we have been abused, vilified and assailed. Dr. Weber's paper was read at last year's meeting of the *A. M. A.*

Now, Doctor, we ask but one thing from *The St. Paul Medical Journal*, and that is fair play. The issue of this matter lies not in the opinions, the likes and dislikes, of yourself or any other man or group of men, but in the justice and underlying common sense of the great rank and file. I am content to leave the final decision to them. There are hundreds of physicians in Minnesota who know us, use our goods, believe in us. Why not go to them?

Very truly yours,

W. C. ABBOTT

Was this letter published in the *St. Paul Medical Journal*? Did it show the slightest inclination to be fair and just in its dealings with us, and to present our side of the controversy to its readers? Again I must answer, No! However, the editor of this journal did vouchsafe a reply, in this respect showing himself more manly than the editors of the two state journals already referred to. He wrote us as follows under date of May 14:

DEAR DOCTOR: I have your letter of May 11. As our journal goes to press a couple of weeks earlier than usual, on account of the meeting of The American Medical Association, I could not in any event get it into our June issue, the forms of which are already made up. I have not decided whether to publish it in the following issue or not. It seems to me, since the statements made in the editorial referred to were taken from the *Journal* of the Association, that if they are not true, they should be denied in the columns of that journal, and if such denial is published there I shall be glad to republish it. If the statements made in *The Journal of the A. M. A.* are not true you certainly have been unjustly treated and deserve redress and should demand such at the June meeting when you will have every opportunity. Surely neither the Editor of *The Journal* or the Association itself will deny you the right to an explanation and a hearing, since the statements published in *The Journal*, if untrue, should be as publicly denied as they were made. I have no desire to do either you or your business an injustice, but after the publication in the Association *Journal* I had so many inquiries that, taking what the Association *Journal* said for the truth, I wrote the editorial based upon that publication. Has *The Journal* declined to publish any statement from you? Do you intend to bring the matter up at the Association meeting?

BURNSIDE FOSTER,
Editor *St. Paul Medical Journal*.

Replying to this letter I wrote Dr. Foster thusly:

DEAR DOCTOR FOSTER: I am in receipt of your letter of the 14th, and regret that my reply to your editorial did not reach you in time for your June issue. We trust that you will decide to publish

it in your July number. Whether I make a denial of the charges against me in *The Journal of the A. M. A.* or not should not affect your decision to publish such a denial of statements made by yourself in your own journal. I feel sure that you will not lend yourself to an injustice or refuse the right of rebuttal of your editorial statements through your columns.

You ask, "Has the *Journal* declined to publish any statements from you?" I answer most emphatically that it has. Last summer when it was attacking certain of our products we prepared and sent a reply to *The Journal* of the Association and its editor refused to publish it. It is true that he published our reply to the attack upon the H-M-C product, omitting, however, a portion of it and using the reply itself as a basis for further attack.

We have learned by experience that we cannot get fair play from the editor of the *Journal* of the Association. We have been persistently sneered at, abused and misrepresented through its pages. This fact does not encourage me to answer this last assault through *The Journal of the A. M. A.* In due time, however, every charge made against me or The Abbott Alkaloidal Company will be fully answered, and I shall see to it personally that you are put in possession of all the facts.

But that has nothing to do with the case in hand. In my letter to you as editor of *The St. Paul Medical Journal* I answered simply the charges contained in your editorial. As a matter of the simplest and most rudimentary principle of justice you should give me an opportunity to reply through the same medium.

I can well understand that you do not sympathize at all with me or my work, which lack of sympathy I believe to be due entirely to the fact that you do not know the character of the work we are trying to do and the ideals which inspire it. In spite of your disapproval of me and my methods I should be glad to have you investigate personally, here in Chicago, my institution and its methods. If when you are attending the A. M. A. meeting you will come to our laboratory I shall do everything in my power to show you that we are "on the square."

Verv truly yours,

W. C. ABBOTT.

Since this date I have been anxiously scanning the pages of *The St. Paul Medical Journal*, from month to month, with the earnest hope, now almost gone a glimmering, that its editor might see his way clear to present the other side of this matter, our side, to his readers.

As in the other journals mentioned, an abstract of the attack of the *J. A. M. A.* upon us was printed in *The California State Journal of Medicine*. In the main the points made were the same as in the others, except for the peculiarly picturesque and yellowly offensive character of the language for which Editor (?) Jones is distinguished. In addition to all the republished falsehoods

there were some bold-faced lies which were peculiarly and characteristically his own, the most striking being the following, which we quote exactly:

Incidentally, and in passing, it may be remarked that some time ago the office of *The Journal of Clinical Medicine* burned, and the mailing list with it; the statement was made as coming from Dr. Abbott, shortly after that event, that he re-established his mailing list by going through the American Medical Directory and putting on his list the name of every member of the Association which appeared in the directory. We cannot vouch for the truth of this, but from the number of copies which reach our own members in California, in some occult fashion, it would seem at least possible.

We did not send an answer to Jones. We have had experiences with him before and have ceased to look for fair-dealing at his hands. Instead we sent a letter to the physicians of California in which we pointed out the absolute falsehood of his statements, especially as regards the above, which is utterly untrue from beginning to end. Our subscription list was not in the building that was burned; *they never have been burned or destroyed*; our records are complete from the beginning, both as regards list and original orders; furthermore, I never have made the statement attributed to me. And still further, after the fire we changed the name of THE CLINIC to its present form, this necessitating reentry with the post-office department and examination of our records, which were favorably passed upon by United States officials. And strangest of all—the A. M. A. directory was not even published till a year and a half after the time during which we are accused of putting on our subscription list the "name of every member of the Association which appeared in the directory!" Is the truth not in you, Jones?

It is by descent to methods like this that the California *Journal* tried to "do us up." Did Jones have the grace to acknowledge his errors when it was called to his attention? Never! In his succeeding number he very skilfully "side-stepped" the direct charge which we made against him—and to this day he has been silent, though never ceasing in his defamatory assaults upon us. Therefore they stand as falsehoods against him.

We might go farther into this matter. Among other things we might discuss our relation to *The Kentucky State Medical Journal*, and repeat some very interesting correspondence we have had with Editor McCormack of that journal. I am happy to say that so far as letter-writing goes he, at least, is a gentleman. The forms of common courtesy are all carefully observed by him. He professes himself not unfriendly to me personally, and yet so far as the columns of his journal are concerned, while wide open to the vilest attack they are just as firmly closed against any presentation of my side of any of these matters as are those of the others named.

As most of you know, a vicious unwarranted attack was made upon myself and Dr. Waugh in a meeting of the Kentucky Valley Medical Society about a year ago, at which meeting Dr. Waugh, an invited guest, read a paper. The man who led this attack, which was intentionally personal in nature and malignant in presentation, in time wrote up what he alleged to be a complete "report" of the affair, and this was published in *The Kentucky State Medical Journal*. As a matter of fact, this "report" was one-sided in the extreme and did not give a correct record of what actually took place at this meeting. I endeavored to present my side through the columns of the same journal, but Dr. McCormack refused it publication.

In all fairness, in presenting any cause, however earnestly he may believe in it, however disinterested his purpose may be, however high his ethics and his morality, what justification is there on the part of anyone in official position in suppressing the opinions of those who disagree with him and in withholding absolutely from the great mass of the men who are, or should be, the jury in all controversies on matters of importance, such as this, a full presentation of *all* the facts, upon a knowledge of which only can right and justice be done?

I have not sought these controversies—do not seek them. For a long time I have been silent. But now, point by point, if I am compelled to do so, I shall put them before

the physicians of America, not because I desire to fight, but in self-defense.

These journals are unjust in the extreme, unfair, and conducted with the venom that for all the time has characterized *ex parte*, beaucroatic doings. Every statement made against us is either false or a simple fact perverted for some ulterior purpose, which must be or soon will be apparent to all. Its *raison d'être* is to kill off Abbott and his industries, because, forsooth, this idea of "doctors for doctors," uncomfortably sands the slide of "the great scheme." Is it winning? Not that anybody knows of. The lemons they are handing us are rather citric, but we've plenty of sugar from other sources, so (as they are useful), let them come.

My published general reply is now ready for distribution. It is yours for the asking.



W. C. ABBOTT.

Chicago, Ill.

PRESENCE OF INDICANURIA IN VARIOUS DISEASES

Carter was the first to call attention to the fact that intestinal obstruction may lead to indicanuria. Jaffé later studied this relationship carefully, both clinically and experimentally. DeVries, Henningens, Senator, Leube, Von Jaksch, and especially Ortweiler, investigated this subject. All authors agree that occlusion of the small intestine, whatever the cause, produces a great and occasionally an enormous increase in the urinary excretion of indican. Jaffé determined that 100, even 150 milligrams were excreted in one day, that is, from 10 to 15 times more than normal. The normal amount of indican excreted in human urine fluctuates between 5 and 20 milligrams a day. By experiments on animals he found that the amount of indican increased within twenty-four hours after ligation, but did not reach its maximum until the third day.

Obstruction of the large intestines in animals (dogs) leads to no increase in the excretion of indican. Any increase at all is quite insignificant in comparison with that produced by obstruction of the small

intestines. In simple constipation, even when very obstinate, Jaffé failed to find large quantities of indican in the urine.

In diffuse peritonitis indicanuria may be extremely marked, particularly in the acute, purulent form, and also in the chronic form. Indicanuria is found not only in diseases characterized by constipation or stasis of the bowel-contents, but also in a variety of intestinal diseases complicated with diarrhea, for instance, typhoid fever, cholera (asiatica and nostras), tuberculous ulceration and simple catarrh of the intestine. This applies, however, only to those diseases that are strictly localized in the small intestine, and not to dysentery and catarrh of the large intestine. This distinction, however, is only apparent, for Osweiler has shown the increased excretion of indican not to be due to increased peristalsis in these cases, but to alterations in the mucosa of the small intestine and the increased putrefaction of intestinal contents that results therefrom. Simple increase of the peristaltic movements of the intestine without lesion of the small intestine (such as is produced by laxatives) not only does not lead to an increase of indican in the urine, but may even cause a diminution of the urinary indican or its complete disappearance. This is due to the fact that the normal amount of indol formed in the intestine is so rapidly expelled in the feces that a smaller quantity than normal is absorbed.

In case of obstruction of the small intestine indican is much increased from the decomposition of albuminous substances and products of putrefaction. In this location the urine may be suppressed. In stenosis of the large intestine indican is often not increased unless there is a cancer. The value of the information derived from the character of the stools and the results of rectal examination is obvious. Obstruction in the duodenum or jejunum is followed by rapid collapse and anuria.

In general it may be said, the more severe and rapid the symptoms the more likelihood that the obstruction is in the small intestine. Indican is increased by animal diet, an increase, which, under other circumstances,

is pathological. Its presence is a sign of intestinal putrefaction. It may accompany a decomposition of albumin in cavities. It is present in empyema and puerperal peritonitis. By detection of its presence in diseases, cavities due to pus may be distinguished from those due to other causes. Indican is increased in acute diarrhea and intestinal tuberculosis. Von Jaksch states that large quantities of indican in the urine imply that abundant albuminous putrefaction or putrid suppuration is in progress in the system. It must not be forgotten that indicanuria will often arise in simple constipation.

Experiments on dogs, which were fed with culture-media of colon bacilli, show that indican increased every other day when 200 Cc. of bouillon was given. In cases of gastric ulcer and chronic gastritis treated in the famous Turck institute we found that indicanuria was present during the whole period of treatment. Also in cases of glycosuria and diabetes insipidus, when no sugar was present. In each case of epilepsy observed in the Iowa State Hospital, Clarinda, an excess of indican was present in the urine. Also in one case of Thomsen's disease, characterized by the occurrence of tonic spasm as the result of voluntary innervation of the muscles.

S. R. KLEIN.

Chicago, Ill.

MISTAKE IN A FORMULA

On page 977 of the July number of CLINICAL MEDICINE there is a gross error in the formula in Dr. Lapierre's article. This formula, as given, contains potassium bromide, paraldehyde, oil of bitter almond, chloroform and oil of cinnamon. Through some unexplainable mistake it is directed that this formula shall contain *one dram* of oil of bitter almond at a single dose! This is absurd on the face of it, the dose of this powerful substance being *one minim*. What was meant, and what the author directed, was a dram of *sweet* almond oil, written, "ol. amygd."

A closer examination of this prescription shows it to have other defects. For instance,

it contains 15 grains of potassium bromide, with no solvent for this salt. Therefore, as written, the combination is an impossible one, though perhaps the whole dose might be taken in milk or emulsion. The amount of oil of cinnamon is also excessive, 10 minims being directed, but one minim being ample to give all the flavor desired.

This prescription is an illustration of the danger of prescribing several powerful remedies together extemporaneously. Give the indicated remedy, and give it to effect, adding only those actually synergistic.

Otherwise, we think there is nothing to criticise in Dr. Lapierre's splendid article. For the principal mistake *we* are at fault.

EMETINE—"NO FEAR FOR THE BABIES"

I have been a reader of *THE CLINIC* and a user of the alkaloids for about five years. I go into a case, give my remedies, and "get results."

Some weeks ago I was called to see a severe case of pneumonia in a boy, aged nine years. He had been under the care of another man who did not use alkaloids "or any other new fad." This man had two cases of pneumonia in the same neighborhood and lost both. I gave my boy calomel, gr. 1-6, and saline laxative until effect, followed up by the compound sulphocarbolates. As soon as I saw the patient I began with emetine, gr. 1-67, one granule every hour; later every two hours.

I do not think you put enough emphasis on the value of emetine. It is an excellent expectorant and the patient learns to depend upon "those little brown pills." I also gave, and continued, strychnine arsenate, gr. 1-67, until recovery. With emetine, codeine, calomel and the sulphocarbolates I fear no case of pneumonia. I know I have aborted cases with the usual alkaloidal treatment.

Hyoscine-Morphine—yes, I use it and have seen no bad effects. My first case was on a German whose foot was crushed, necessitating amputation of two toes. There was no other doctor to be had, so I gave one tablet, waited an hour, used about

one dram of chloroform, and went to work. The result was good, and I have used the anesthetic often since.

But I must stop, only adding that I have a good supply of "clean-out and clean-up" remedies on hand and have no fear for my "babies" this summer.

F. L. HOLCOMB,

Coldwater, Kans.

THE ANTHROPOID RACES IN THE ADVANCE OF SCIENCE: A CRITICISM ON DR. SECOND'S POSITION

It is generally conceded to be useless either to ridicule the superstition of the ignorant or to try to teach them scientific facts. Many persons live to a ripe old age who seldom or never question the validity of any of the legendary tales that were told them by their fathers and mothers. There are many boys and girls who would grow to manhood and womanhood, if it were not for the bad element in public schools, without having a true knowledge of the *via nature* of their own births. When I was a boy I believed every word of every story mother told me. When she spoke of death, resurrection and eternal life, I wept; and when she spoke of the creation of the world in six days I asked her hard questions which were never satisfactorily answered. My mother knew nothing of the theory of evolution, and for years I was inclined to look upon Charles Darwin as a fool for promulgating such a theory as the descent of man from a monkey. Like a baptist minister of my acquaintance, who had never read Darwin's work, I was inclined to think that "it may be that the monkey has descended from man. Possibly he is one of the descendants of Cain." But, there are no facts which would tend to prove such a line of descent; while on the contrary there are facts which go to prove that man has ascended and is ascending in the organic scale.

Savages believe that there is a supernatural influence or power which is constantly at work in guiding their destinies. No doubt this belief, by intimidating the spirit of the Germans, played an important part in giv-

ing the fearless Roman army under Julius Cæsar the victory over the Germans under Ariovistus. The God that we serve is not our highest conception of a civilized human being, but, on the other hand, is an unfeeling inhuman savage, possessed of the same savage attributes which the ancient priests of Scripture possessed. Many, even at present, try to live and think as the savage man lived and thought at the dim dawn of civilization. Hence the evolutionist has marched to a higher conception of the destiny of man, while the fanatic remains six thousand years behind the times.

While I do not wish to underestimate the value of Dr. Secord's article on "The Alkaloids in the Highlands of Guatemala" (CLINICAL MEDICINE, June, 1908, p. 769) I cannot refrain from criticising the position he holds as unbecoming that of a true scientist.

"Eight years of continuous service among the great aboriginal race of the highlands of Guatemala, and among the offspring of Spanish and Cuban marriages, have given abundant proof that the Lord Jesus Christ is the same yesterday, today and forever, and that he honors simple trust in His Word, be it ever so weak. As the Apostle Paul wrote in 2 Cor. 5:10: 'As poor, yet making many rich, as having nothing and yet possessing all things, so we can in part, apply the same words to ourselves.'"

Whatever advantage the doctor's medical education has given him over an ordinary missionary, it is certainly clear that the advantage is not due to any presupposed mythical power which has guided the work; but it is due to medical science. Has the doctor given due credit where credit belongs, or is he advocating the reign of superstition above the sway of science? God forbid that the times should revert to the days of Galileo.

On page 772 the doctor tries to ridicule Darwin by presenting a picture of an anthropos (from Greek—, *anthropos*, man—of the genus *Homo*; and an anthropoid—*anthropos*, man, and *eidōs*, appearance—of the genus *Platyrrhine* or *Abidæ*).

At first sight the picture conveys an idea of what is meant by Darwin's phrase "the

survival of the fittest." On close examination we find that there are many points of resemblance between these two animals. Both present for examination a head with two eyes, a nose, mouth and teeth of similar appearance; a neck and trunk with four extremities, the upper extremities being divided into an arm, forearm, wrist, hand and fingers, while the lower extremities are divided into a thigh, leg, ankle, foot and toes.

The abdomen presents corresponding viscera in both creatures down to the appendix vermiformis. The first appearance of this functionless and dangerous structure is seen low down among the mammals, in the marsupial group, in the wambat. No sign of it again appears till the ichneumon and pig are reached, but not then is it a true appendix. It is next seen in the lemurs and higher apes, as chimpanzee, orang, gibbon and gorilla.

It is true that the anthropoid is in possession of a caudal appendage, so was the anthropus at an early period of embryonic life; but, like the tadpole in emerging to a frog, he lost it long before his birth, and is now in possession of only a rudimentary coccyx to tell the story of his loss.

If we were to dissect both creatures, we should find less difference in the anatomical structures than we find on a superficial examination. We should use the same terminology for the structures in the dissection of both creatures. In the anthropoid we would find that the cerebrum does not cover the cerebellum as it does in the anthropus; but otherwise our terminology would correspond, with slight differences, down even to the gyri, sulci, and fissures.

It was the experiments of Ferrier of England on the brain of the anthropoid, before the days of antiseptic surgery, that gave us an exact idea of the localization of cerebral function. He proceeded by cutting down on the brain and stimulating certain areas, which he found to preside over the various groups of muscles of the body, as the arm, hand, fingers, leg, foot and toes. Had it not been for these experiments of Ferrier, our advance in cerebral surgery would have been delayed, perhaps, many centuries; because

a knowledge of cerebral function gained through operations on the human subject, if it could come at all, would come slowly.

When we come to reflect on this advance, we ought to be ready to acknowledge the infinite debt of gratitude we owe to the harmless little anthropoid. If we were to arrange the primates according to their cerebral characters, they would bear the following relation to each other: *Homo*, *Pithecus*, *Troglodytes*, *Hylobates*, *Semnopithecus*, *Cynocephalus*, *Cercopithecus*, *Macacus*, *Cebus*, *Callithrix*, *Hapale*, *Lemur*. The great break in this series is not between *Homo* and *Pithecus*, but lies between *Hapale* and *Lemur*; and this break is considerably greater than that between any other two terms of the series. (Prof. Huxley.)

The best way to appreciate an author is to read what he had to say; and for that reason I quote the following from the "Descent of Man."

"The main conclusion arrived at in this work, namely, that man is descended from some lowly organized form, will, I regret to think, be highly distasteful to many. But there can hardly be a doubt that we are descendants from barbarians. The astonishment which I felt on first seeing a party of Fuegians on a wild and broken shore will never be forgotten by me, for the reflection at once rushed into my mind—such were our ancestors. These men were absolutely naked, and bedaubed with paint, their long hair was tangled, their mouths frothed with excitement, and their expression was wild, startled and distasteful. They possessed hardly any arts, and like wild animals lived on what they could catch; they had no government and were merciless to everyone not of their own small tribe. He who has seen a savage in his native land will not feel much shame if forced to acknowledge that the blood of some more humble creature flows in his veins. For my part I would as soon be descended from that heroic little monkey who braved his dreaded enemy in order to save the life of his keeper, or from that old baboon, who, descending from the mountains, carried away in triumph his

young comrade from a crowd of astonished dogs—as from a savage who delights to torture his enemies, offers up bloody sacrifices, practises infanticide without remorse, treats his wives like slaves, knows no decency, and is haunted by the grossest superstitions.

"Man may be excused for feeling some pride at having risen, though not through his own exertions, to the very summit of the organic scale; and the fact of his having thus risen, instead of being aboriginally placed there, may give him hope for still higher destiny in the distant future. But we are not here concerned with hopes or fears, only with the truth as far as our reason permits us to discover it; and I have given the evidence to the best of my ability. We must, however, acknowledge, as it seems to me, that man, with all his noble qualities, with sympathy which feels for the most debased, with benevolence which extends not only to other men but to the humblest living creature, with his godlike intellect which has penetrated into the movements and constitution of the solar system—with all these exalted powers—man still bears in his bodily frame the indelible stamp of his lowly origin."

I do not think it wise to underestimate the value of Darwin's work on the ground that it differs from the theory of creation as given in Genesis. I can say with Prof. Huxley that:

"I really believe that the alternative is either Darwinism or nothing, for I do not know of any rational conception or theory of the organic universe which has any scientific position at all besides Mr. Darwin's. I do not know of any proposition that has been put before us with the intention of explaining the phenomena of organic nature which has in its favor a thousandth part of the evidence which may be adduced in favor of Mr. Darwin's views. I believe that Mr. Darwin's work is the greatest contribution which has been made to biological science since the publication of the 'Regne Animal' of Cuvier, and since that of the 'History of Development' of Von Baer. I believe that if you strip it of its theoretical part it

still remains one of the greatest encyclopedias of biological doctrine that any one man ever brought forth; and I believe that, if you take it as the embodiment of a hypothesis, it is destined to be the guide of biological and psychological speculations for the next three or four generations."

In conclusion I should like to say: (1) That I regret the loss to science of whatever contribution the Doctor's trip to the Highlands of Guatemala might have given. (2) There are no tears to be shed by a Darwinite over the appetizing meat of the monkey, which is the nearest human meat of any living species. (3) If you want to see the eyes of a cannibal brighten at the thought of the sweet, appetizing flavor of human meat, just ask him what human meat tastes like. (4) So far as the structural differences between man and monkey are concerned, we have a plain case of where the pot can't call the kettle black. (5) On the authority of R. L. Garner, who spent considerable time in the jungle in learning the speech of monkeys, the chimpanzee is the only representative of the anthropoid races that has ever signed his name to an English document.

L. B. EVANS.

Baltimore, Md.

HAY-FEVER: IT'S SUCCESSFUL TREATMENT

A remedy used with astonishing results in Europe for hay-fever is a mixture of anæsthesin, subcutin, milk, sugar, acid boric and paranephrin. The application is almost at once effective and must be repeated three or four times a day. But it is worth the trouble, for almost instantly the sneezing and "running" of nose and eyes stops, to the intense relief of the patient.

The preparation is not cheap (\$10.00), owing to the not cheap ingredients, the use of a costly mixer and emulsifier and the fact that the preparation does not keep the year over. But it is an ideal preparation, containing no harmful ingredients at all and saving the expense of a trip to the North Pole. I am at the disposal of the brethren for

further particulars as I used it last year with remarkable success.

D. ZWIGTMAN.

Niles, Mich.

A METHOD OF RELIEVING OR CURING HAY-FEVER WHICH SUCCEEDS

A review of recent literature reveals the fact that nothing of particular value has been learned about the cause of hay-asthma, hay-fever, or rose-cold, as it is variously termed, since Dunbar proved that the pollen of certain grasses contains an albuminoid substance (toxin) which when inhaled by a susceptible person promptly produces the well-known symptoms. As a result we have "pollantin" and other preparations of pollen which are supposed to act in a manner similar to sera; but here, alas, as elsewhere, failure is just as likely to follow treatment as success.

The thinking and observant practitioner long ago came to the conclusion that in the hay-fever victim two distinct abnormal conditions obtain: First—and perhaps most important to the therapist—the *systemic* dyscrasia, taint or lack of resistance (which ever it may be); and second, the *local* congestion or lesion.

Any treatment to be effective in even the majority of cases *must* be founded upon a recognition of the dual condition, and the cocaine sprays and other popular "dopes" are, as a matter of fact, more injurious than beneficial, for, by obtunding sensibility and masking symptoms, they lead the patient to take needless risks and blind the busy doctor to the existent abnormalities which should receive prompt and decided attention.

Four years ago I outlined a method of treatment for hay-fever which had given excellent and lasting results in a large number of well-marked cases. It was tried by several physicians throughout the country, in some instances thoroughly, in others half-heartedly, and at first the reports of failure were quite as frequent as those of success. The next year a score of men wrote and demanded the local

and internal medication, stating that their patients refused to enter the dangerous season unprepared. Last year many of these people missed their annual attack and those who did suffer at all experienced little discomfort. The news spread and this year already numerous doctors are asking help.

A few minutes' study of the pathological conditions which are now known to exist in nine out of twelve patients afflicted with hay-fever will enable the physician to appreciate the rationale of the treatment suggested. In nearly every case we have a congested (catarrhal) condition of the posterior nares and turbinated bodies, and quite often some grosser lesion exists. Spurs, deflection of septa, rhinoliths or polypi will be discovered in a large percentage of cases if proper search is made for them, and a cure may hardly be expected under any medication unless the local disorder is corrected. *But* the average doctor is not likely to get permission from the hay-fever victim to operate during the acute stage or even examine the nares very thoroughly. What the suffering victim demands is *relief* and when this is secured a *cure* may be considered.

It is wise, therefore, to impress upon those likely to be infected the necessity for early treatment; and in such cases, if proper procedures are instituted, the annual attack will often be averted and a prevention of its return is very possible. The regular treatment outlined should be instituted always, and such additional measures taken as may be demanded by individual conditions.

The removal of a spur or reduction of an enlarged turbinal will not, however, *alone* suffice. The mucosa must be "toned" and rendered normally resistant and the systemic susceptibility removed in each instance. This, and this only, the treatment I have devised accomplishes. Asthmas of different origin often yield to these eliminative, tonic and alterative measures, but cardiac, renal or hepatic disorders of a distinct type should, if discovered, be treated separately.

Hay-fever cannot possibly be treated "specifically" and no one formula or set of formulas can meet all cases. But just as positively as certain departures from the nor-

mal exist in each case, so just as surely certain definite therapeutic procedures will prove corrective. The doctor in charge must of necessity modify his medication to suit individuals; were skill not necessary there would be no need for the doctor at all.

I shall not attempt to describe the pathology of hay-fever further than to state my opinion that autointoxication or perverted metabolism may be regarded as the primal cause in almost every case. Certain substances are formed and persist in the body-fluids which when brought into contact with the pollen of ragweed, golden-rod, wheat grasses, roses, etc., combine, forming an irritant which produces hyperemia with its attendant irritation, exudation, etc.

Oxalates and bile will be found in the urine of many hay-fever patients; the specific gravity is high nearly always, and the output of fluid insufficient. In other cases uric-acid crystals are abundant. I have never yet seen a case in which renal intestinal or hepatic torpor did not exist.

We are of course familiar with those peculiar—and rare—cases in which the typical attack follows the smelling of an artificial rose. And again we all know that certain people begin their sneezing at just such an hour on such a date. Suggestion is generally allowed now to be a powerful agent, and if the constitutional and local conditions are ready to respond to a certain stimulus, the mere belief that that stimulus exists will produce the symptoms. I see no reason to doubt the efficacy of treatment in such cases; if we remove the culture-media the bacteria or spores cannot possibly grow.

The *symptoms* of hay-fever are too well known to need description. The *treatment* is simple in the extreme, but the doctor who would get perfect results should begin to medicate weeks before the attack. Prevention is better than cure, but what cannot be prevented *can* be cured in this case. Elimination, improved metabolism and restoration to a normal condition of the nasal mucosa are the keynotes to remember. Secure a full daily stool and proper output of normally constituted urine. Regulate the diet and see that the system receives no more than it

can well dispose of. The skin requires constant attention. Nine people out of ten who think they bathe do not remove half the effete matter which exists in hot weather, and five minutes' friction with a rough wash-cloth well soaked in a solution of magnesium sulphate will cause the average man to revise his methods of "keeping clean." Insist upon this epsom-salt sponge daily, using an ounce to two quarts of water.

In cases where hepatic inactivity is quite marked it is well, before beginning treatment proper, to exhibit blue-mass and soda, gr. 1-2, with gr. 1-6 leptandrin, euonymin or juglandin (as may be indicated) hourly for four hours after 5 p. m. A saline laxative next morning will be desirable. Repeat this medication on the third and sixth nights. As an eliminant, calomel, leptandrin, podophyllin and iridin may be given at 7 and 9 p. m. each night thereafter till conditions are satisfactory, then every night for a time.

An alterative formula (containing calx iodata, arsenous acid, quinine valerianate and nuclein) should be given half an hour prior to food, and a sedative (consisting of equal parts of hydrastin, collinsonin and helenin) one hour after eating or midway between meals, as may prove most desirable. In uric-acid cases calcium carbonate, with colchicine and lithium, will give very prompt results if used for ten days or two weeks. This is best given with half a glass of thin barley (or lithia) water midway between meals. Here the "sedative" tablet would be exhibited an hour after food.

Adrenalin chloride, colorless hydrastis, atropine and glycerin, in solution, are applied thoroughly, locally, with a cotton-wrapped probe, *after the nares have been well cleansed with an alkaline antiseptic*. This should not be used in an atomizer but either be snuffed up or applied through a glass nasal douche. Atomizers are injurious in hay-fever cases. I prefer the menthol compound formula; one tablet to ten or twelve ounces of water; add ten drops of glycerin.

Seiler's formula, however, is excellent. The first local treatment should be given by the doctor, even if no gross lesion needs at-

tention; then the patient may apply the solution himself just often enough to secure comfort. The douche is used morning, noon and night; less often in mild cases. Have the patient come to the office for treatment every third or sixth day and examine his urine at similar intervals. By modifying this treatment to suit individuals and correcting remediable abnormalities in the usual way nine out of ten hay-fever patients can be either cured or so relieved that they can stay at home and do business.

GEO. H. CANDLER.

Chicago, Ill.

A REMEDY FOR CONSTIPATION

IN CLINICAL MEDICINE for June, under the heading "Cascara," I read as follows: "We have yet to recognize an agent which acts upon the colon exclusively or even to a marked degree more than it acts upon the small intestines and upon the rectum. Such an agent would be exceedingly desirable could it be developed."

Well, there is just such an agent in the market. It was brought to my notice by a friend who seems to be well acquainted with many valuable remedies which are unheard of by the profession—at least in this region of "therapeutic nihilism."

I often have had cases of obstinate constipation in which ordinary cathartics were inoperative, until an impacted mass in the colon could be broken up by injections. In such cases I have found this remedy invaluable, and I have within the short time I have known of it broken up some severe cases of consipation of years' standing. It is an aquatic plant growing on the coast of southern China. This drug has no effect upon the digestive tract until it reaches the colon, when it moistens and softens the impactions, resulting in easy stools.

I do not write this to procure a free advertisement of this remedy, which is imported by a chemical house and from whom I obtain it, for I have not yet found a druggist or practitioner in Boston who ever heard of it. It is mentioned briefly in the last edition of the U. S. Dispensatory.

It is not a "liver stimulant," and where constipation is the result of hepatic sluggishness or imperfect peristaltic action I do not presume to assert that it would be effective. It seems to possess a peculiar affinity for the lower colon, and to pass the stomach and small intestines absolutely intact. It is tasteless, and my favorite method of administration is to mix a teaspoonful of it with the cereal one has for breakfast, or in a dish of the plebian apple-sauce.

As I remarked, I have no intention of procuring a free advertisement of this remedy in your valuable columns. Should this meet the eye of the importer he can avail himself of the columns of medical journals and thereby put a valuable agent in the hands of the profession, and save me from being swamped by a shower of letters of inquiry, not one in ten of which contain a stamp for reply.

I like your remarks regarding "eusoma." I have used this preparation extensively ever since Dr. Chamberlin put it on the market, and have found it invaluable in eczema and kindred diseases. It is an effective remedy for the brown-tail moth infection.

JAS. R. PHELPS.

Dorchester, Mass.

[The remedy referred to by Dr. Phelps is "regulin." The plant belongs to the same family as *fucus vesiculosus*, and is marketed by The Reinschild Chemical Company, New York.—ED.]

ANOTHER MONSTROSITY

Commenting upon Dr. DeMoss's report of a monstrosity, in your June number, you ask for brief reports of similar cases. Here is one.

While practising in Springfield, Mo., twelve years ago, I was called to wait upon a healthy young primipara who gave birth to a six-months fetus which had but one leg; the pelvic bones seemed to be normal and the buttocks well rounded out, but there was an entire absence of the right leg. There were only four toes on the left foot. The vagina and rectum were in normal posi-

tion. The head was fairly well developed. The liver and bowels were on the outside of the abdomen, the liver being four times the normal size. The hands were webbed.

The fetus was completely delivered without rupture of the membranes. Upon opening the sack and finding such an abnormal fetus, I put it into alcohol, and still have it in my office. Many physicians have examined it and think it quite a rare specimen.

The alkaloids are all right. I have used them ever since I began the practice of medicine, and when given to effect they have never failed me yet. Keep up the standard of the alkaloids and it will be only a few years until this will be almost the universal form of medication. Success to THE AMERICAN JOURNAL OF CLINICAL MEDICINE!

WM. LATHIAN.

Joplin, Mo.

ANSWER TO "A TUNNEL THAT DOES NOT CONNECT"

Pathology stands in direct relation to diagnosis, and diagnosis stands in direct relation to therapy. How can one prescribe intelligently for a condition about which he knows nothing? Many a time I have gotten down my old Green's "Pathology" and pored over its pages to help me out in making my diagnosis of an obscure case, and have been rewarded for my labor in arriving at proper conclusions, fixing my diagnosis and clinching on right treatment for the case. Yes, we believe in pathology, and the more we know of it the better physicians we shall be. Pathology also assists materially in making your prognosis in a case, which again is a benefit to one in that it inspires confidence.

J. ZIMMERMAN.

Lynnville, Ind.

[Well answered! If in the editorial which you criticise we aroused thought, pro or con, it has answered its purpose. The pendulum of scientific knowledge has been swinging far to the theoretical side—to excessive study of pathology—and neglect of the prac-

tical—therapeutics. In studying disease we often fail to study our patients. We have looked at the sick from the standpoint of the dead-house. Our knowledge, if we are to be practical men, must be balanced; but the practising physician needs to train his powers of observation at the sickbed more than anything else, and if reverence for pathology bedims his clinical vision his possibilities of service to those he is called upon to treat are impaired indeed.—Ed.]

A GREAT MEDICAL SCHOOL AT CINCINNATI

We learn from *The Lancet-Clinic* that the Miami Medical College has surrendered its charter and will become an integral part of the University of Cincinnati, as the Medical College of Ohio did some years ago. By this action and the combination of these two strong schools it is expected to build up one of the strongest medical institutions in the country, one which in equipment, teaching force and laboratory and clinical equipment will rival such institutions as Johns Hopkins and Harvard. A magnificent new building will be erected near the new City Hospital site and the hospital will also be, in a sense, a part of the medical school. Both will be city institutions, since the university is maintained by the city of Cincinnati. A postgraduate course will also be a part of the new school.

We congratulate our sister city upon this merger. Would that we could have its like in Chicago, one in which there should be no control by cliques and none of the bitterness and weakness of partisan jealousies and self-seeking. May the great Cincinnati medical school of the future be sweetened by complete harmony and controlled by the single desire for professional betterment. This is a great opportunity. May those in control of its destinies arise to a full appreciation of its possibilities.

The editor of *The Lancet-Clinic* gives some excellent advice which deserves the consideration not only of the promoters of the new Cincinnati school but of all medical institutions, wherever situated. He says:

"Let personal, factional and race prejudices be forgotten. In the selection of men for the chairs let ability and character be the only desiderata. And when appointed, let there be academic freedom—freedom to think, act and speak according to convictions. No man or set of men should have dictatorial powers. Such a policy would only spell ruin ultimately. Should a coterie of men gain control whose ideas are not lofty, they will but have grasped fruit of the Dead Sea. Money, equipment and beautiful buildings are much to be desired, but they alone will not make a great center of learning. It is men—men of ability and learning, men with great force of character and high ideals—who must stamp their individuality upon the school. It was not the buildings and equipment that made Cincinnati great formerly, but rather the Drakes, Blackmans, Bartholows, Conners and other strong men of those days."

"THE THEORY OF HOMEOPATHY": A CRITICISM BY THE HYBRID

Dr. Shedd's article in the June *CLINICAL MEDICINE* is heralded as "a complete outline of homeopathic doctrine," and you, Mr. Editor, announce in a footnote that it "presents the case for homeopathy" and inquire, "Who will submit the best answer?" I submit the following as an aspirant for that honor.

Dr. Shedd opens his dissertation by saying, "The cultivation of a beneficent militant spirit is desirable in students; the spirit which seeks out error to demolish it, and which has a keen blade in defense of truth." I need hardly lay claim to the militant spirit, and will leave the decision as to its beneficence to my readers, as the opinion formed will vary with the point of view.

Dr. Shedd begins by defining "certain technicalities" with so much verbiage that an ordinary mentality like mine finds it somewhat difficult to be sure "where he is at." And he certainly fails to define the most important technicality, which is homeopathy itself. Which homeopathy is under discus-

sion? Is it Hahnemann's, or Shedd's, or the Transcendentalist's?

I have a great respect for the genius of Hahnemann, and believe the practice of medicine, and through it humanity, owes him an enormous debt. I am also fully persuaded that had he not become narrowed, by the persecution of his regular confrères, he would have made the debt much greater, because he would, in all probability, have recognized the limitations of the law he championed. His partial failure should be one object-lesson to CLINICAL MEDICINE, which has fully as great and beneficent a work on hand and has found the persecution, but as yet gives no sign of its narrowing effects.

My experience has convinced me that "*similia similibus curantur*" is an infallible law of cure when the vital force is deficient or depressed, and an unqualified failure when the vital force present is superabundant. Had Hahnemann modestly presented this view instead of his absurd assertions of the law's universality and infallibility it would long ere this have been adopted by the whole profession.

The advocate of homeopathy always refers an opponent to the "Organon," shrewdly depending on the fact that hardly one regular schoolman in 10,000 has the patience to read what, in the light of present-day knowledge, is a mass of absurdities. The copy I have is the fourth American edition, published in New York in 1860. It has prefatory remarks by Constantine Hering to this and also the first American edition; by Samuel Stratton of Dublin to the first British edition, and by Samuel Hahnemann to the 5th British edition, which should give it the stamp of authority.

In support of my somewhat militant position defined above I would say that in the very first sentence of the preface Hahnemann declares, excess of blood, plethora, is never present. You can imagine how difficult it would be for me to pass beyond such a statement in pursuit of knowledge when you know that one of my earlier recollections is watching my father bleed a purple-faced man to pallor after my face and pinafore had

been thoroughly spattered by the first gush of blood. But after I had practised regular medicine a number of years a homeopath with his small and infrequent doses compelled me to acknowledge defeat and converted me into a student of the system.

For over twenty years I have been studying it by the bedside and in books and have learned that it contains some things that regular medicine needs very badly indeed, and that the "Organon" is useful chiefly as a bugbear.

Fancy anyone, let alone a man of Dr. Shedd's intelligence, setting it up as a fetish; when he knows it teaches (Section 80) that disease is due to three miasms; two of these, syphilis and sycosis, "disclose the specific internal affection whence they emanate—the one by chancres and the other by excrescences in the form of cauliflower."

In the same section the "Organon" teaches that just as a chancre comes from the miasm Hahnemann calls syphilis, so does the rash in scabies, and many other diseases as well, come from the miasm he calls psora (i. e., the itch). For he writes: "It is not until the whole of the organism is infected that psora declares its huge internal chronic miasm by a cutaneous eruption (sometimes consisting only in a few pimples) that is wholly peculiar to it, accompanied by insupportable tickling, voluptuous itching and a peculiar odor." (Voluptuous itching is rather good!) "*This psora is the sole, true and fundamental cause that produces all the other countless forms of disease.*" This list covers a wide variety of diseases, from nervous debility to idiocy, from hysteria to insanity, from hypochondriasis to epilepsy, from nosebleed to phthisis, from piles to paralysis, from metrorrhagia to cataract, from spasms of all kinds to pains of every kind.

On page 789 of CLINICAL MEDICINE Dr. Shedd labors to make it appear that Hahnemann published a note to an article in a German journal, in 1792, showing he knew about the acarus scabiei at that date. But Samuel Stratton in his preface, referring to the above, says that he published his first dissertation on homeopathy in *Hufeland's Jour-*

nal in 1796. Aside from the fact that we are discussing the great authority, "Organon," Dr. Shedd's appeal to papers not easily accessible will hardly do, because as late as 1830 Hahnemann himself wrote a note to Section 80 of the "Organon" in which he says: "It has cost me twelve years of study and research to trace out the source of this incredible number of chronic affections (referred to above) to discover this great truth, which remained concealed from all my predecessors and contemporaries—to establish the basis of its demonstration and find out at the same time the principal antipsoric remedies that were fit to combat this hydra in all its different forms."

Dr. Shedd (CLINICAL MEDICINE, p. 487) makes it clear that if Hahnemann knew of the itch-mite as early as 1792, by quoting his treatment "as baths or washes of sulphureted hydrogen, sulphur ointment, etc." he certainly got more light and changed his treatment before 1833, because in that year he wrote (see note to his preface to the 5th edition of the "Organon"): "I am therefore sorry that I once gave the advice, savoring of allopathy, to apply to the back in psoric diseases a resinous plaster to cause itching, and to employ the finest electrical sparks in paralytic affections. For as both these appliances have seldom proved of service, and have furnished the bastard homeopaths with an excuse for their allopathic transgressions, I am grieved that I ever proposed them, and I *hereby solemnly retract them*. (The italics are Hahnemann's.)"

Samuel Hahnemann, when he was 78 years old, wrote (Preface to "Organon," 5th British Edition): "Homeopathy is a perfectly simple system of medicine, *remaining always fixed in its principles as in its practice*."

Dr. Shedd writes in CLINICAL MEDICINE, in this year of our Lord (p. 647): "The 'Organon' is not impeccable. If rewritten by Hahnemann today there would be alterations, betterments, just as he changed the various editions of the book." Quite so—but if so, why does Dr. Shedd write (CLINICAL MEDICINE, p. 646): "In the study of homeotherapeutics we naturally turn

to the "Organon"—rarest of all phenomena, a medical work whose practical value does not and cannot lessen—whose conclusions are irresistible and stable as long as the human type which it considers remains the same."

I agree with Dr. Shedd (CLINICAL MEDICINE, p. 645) that there exists a law of drug-action, termed the homeopathic law, "*similia similibus curantur*."

Dr. Shedd agrees with me (CLINICAL MEDICINE, p. 645) that "there is another law, equally demonstrable, the antipathic, or the law of *contraria contrariis curantur*."

But Dr. Shedd believes the former law to be universal, and as a consequence, like all homeopaths, he has no use for the latter law. I believe both these laws have limitations, that neither of them is universal, and that any physician who has them clearly defined in his own mind can use them both (as I have) in prescribing for his patients to their great advantage.

If Dr. Shedd is right when he writes (CLINICAL MEDICINE, p. 645) "that there exists a law of drug-action, termed the homeopathic law, *was noted by Hippocrates*, and it has been verified in the last century of clinical experience thousands and thousands of times," then both these laws were known long before Hahnemann's day. For if Hippocrates knew of the law of similars, everyone knows that if there was anything Hahnemann abominated more than regular-school men it was the law of contraries of which they approved.

Dr. Shedd, as a homeopathist, can know nothing of stimulants, sedatives, etc., nor a depressed or excited condition of the system such as plethora. Therefore it would be simply useless to undertake in a reply to him to demonstrate the correctness of my position in reference to the law of similars as stated early in the paper.

I have been pressing my views upon this point for a number of years in various journals to such an extent that the editor of one homeopathic journal (*The Medical Advance*, Chicago) in 1906 declined to publish anything more upon the subject *because he feared its effect upon his readers*.

Should this paper be approved I may, if permitted, take up the matter in *THE CLINIC*, though it involves an attack upon the prevalent, but, to me, absurd idea of the dual action of drugs.

G. M. AYLESWORTH.

Collingwood, Can.

SOCIETY'S ATTITUDE TOWARD THE SEX-PROBLEM

I sometimes wonder whether the other poor devils who, like myself, lost everything they had of this world's goods in the San Francisco disaster, are short enough on books so that they are compelled to read their medical journals more thoroughly. If they do I am sure they will agree with me that it has not been nearly so great a misfortune as one would at first suppose. In fact I have been benefited by the change, for I feel myself drawn more closely in touch with others who are earnestly trying to find better ways of doing things. I also find many articles which interest me greatly and that are really vital issues, left but partially discussed as if the ground was dangerous and should not be further pursued.

In the June, September and December numbers of 1907 *CLINICAL MEDICINE* some articles of this character appear under the title of abortion and the attitude we should take toward the sex-problem, but no definite conclusions are drawn as to what would change the evil. Quite to the contrary, the man who offered a suggestion as to opening the question and discussing it till some definite solution of the problem was reached, was promptly given the worn-out "saws" of the past—leaving the old lines undisturbed.

I refer to the article by Doctor Brownson, and the replies given by "A Pupil" and Wm. Patch. The replies are neither adequate, logical nor helpful.

In reading the article by "A Pupil," one does not need to look far to see where he stands, as well as the source of his statements. Had such cloggs to progress as Orestes Brownson been allowed the balance of power in the world, we should yet be back in the "one thousand years of darkness"

and alkalometry as well as all the other sciences would still be unborn.

One quotation from the writings of Orestes Brownson, said of himself, will be sufficient to allay any anxiety as to his ever being more extensively read, either in a hundred or ten thousand years from now, because the mind of man ever widens in its scope, looking with pity on the ignorance of the past and burning with hope for the future.

Orestes said: "It is not my province to teach; all I am free to do is to produce with scrupulous fidelity that which I am taught." Against Doctor Brownson, "A Pupil" has substituted ridicule for argument, a practice that is the chief means of combat with those of the Orestes Brownson type. "Common Sense" and "Rights of Man" were always like pepper in the eyes of those who never get beyond parroting that which they have been taught.

As I read Doctor Brownson's article I do not feel that he meant to lay stress on, nor advocate, criminal abortion, but rather to show that our attitude toward the sex-problem is utterly absurd and not in line with progress, and that we are in this state owing to the false teachings of institutionalism which tries to instil into the minds of the young that it is sinful even to consider the sex-organs.

Doctor Brownson laid stress on the importance of educating the young in all that is to be known regarding the sex-organs, and also showed that the practice of keeping this knowledge from them and leaving them to learn what they could from bad companions is pernicious. From his article I believe he feels that we should teach children all that is possible about themselves and thus throw the responsibility of their acts upon their own shoulders, thereby helping them to be a law unto themselves.

Knowledge is the only road to morality and must reside in the individual, not in a sect or institution.

In reply to Wm. Patch I would state that "patching" up old customs has been the work of all the celebrate lights in literature to whom he refers, and for this reason their work has ever been a curse to mankind.

The moment we advocate ignorance of the function of any organ of the human body, that moment we spit in the face of the creative genius that brought it into being.

Ridicule or "pointing with pride" to effete institutions that are responsible for the rottenness of society is not argument, hence let us get together and face facts, and try if we cannot find remedies that shall embody all that is true of the old, and willing to grasp with eagerness that which seems to be true of the new. As I take it, this is the spirit of CLINICAL MEDICINE and of alkalometrists generally.

1. Abortion for any other purpose than that of saving life is looked upon by all right-minded persons with abhorrence and is considered murder.

2. The prevalence of genitourinary diseases is not due to anything but the falsely conceived opinions in regard to sex and the appalling ignorance of those who cohabit.

3. What *should* be done with the sex-organs, and what *is* done with them, are two vastly different things; and as the great majority of mankind insist on using them for pleasure as well as for procreation, we are obliged to face that problem—not ignore it, and by stating platitudes, dodge the issue.

4. Nature shows us that animals prevented from using their sex-organs resort to masturbation, and every physician knows only too well that the human animal is no exception to the rule. So thoroughly is this recognized that in every clinic where large numbers of patients are treated, when taking histories the question is asked, "Has he or she masturbated?" and so little faith has a physician in a denial that the record is written, "It is denied."

5. Another fact we must face is, that society considers it right for men to be prostitutes, yet entirely wrong for women, and all the teaching thus far brought forward has tended to strengthen that idea; though it is in direct opposition to nature's laws (God's laws). The falsity lies in our institutions which recognize but one function of the physical as being the seat of virtue, hence persons having their sex-organs inviolate are

called virtuous regardless of how vile may be their other qualifications.

6. That our laws are not based on right thinking is proved by the rapid increase of crime, infidelity, genitourinary diseases and our crowded divorce courts.

Let us now look at some of these facts in a logical way:

(1) Why should a woman wish to abort?

(a) The primary cause lies in the fact that we, by a false ethics (not founded on nature's laws), have fallen below the animal kingdom in making motherhood a disgrace and the offspring a pariah, unless it be in conformity with the rules laid down originally by the barbarian Cecrops, and no woman dares brave the fetish of custom unless she has great strength of mind and stands on her own right to procreate, regardless of man-made laws, even though her own heart tells her that there is no sin in sex, and that if she be guilty the man must also be. The shotgun ilk is responsible for this state of affairs.

(b) The next cause for her desiring abortion is, through ignorance of the means to prevent conception she is forced to nurture an unwelcomed offspring, and knowing full well that she lacks the vitality to properly nourish a child, she seeks relief through the abortionist.

(c) The mother-instinct of the female tells her that a child has the right to be well-born, and that unless she can welcome and love it from its inception, as well as impart vitality, she has no right to bring it forth.

(d) Lastly, any person capable of reasoning will agree that a woman who so lacks those qualities which should make her desire motherhood, that she is unwilling to carry a child, cannot bring forth a properly balanced being. This being the case, she should have all the knowledge possible furnished her to enable her to avoid pregnancy. There is no just reason against the prevention of conception, any more than there would be in trying to force copulation on those who desire continence.

As space will not admit the discussion of all the points raised, I will close with the consideration of heading two:

If there ever was a question on which we as physicians should try to get legislation, this one of genitourinary disease should cause us to come together, regardless of school affiliations, and fight the common foe. In the October CLINIC under "Therapeutic Nuggets" are given statistics that would almost make a dead man sit up and think. "Eighty percent of blindness, and seventy percent of abdominal pelvic operations are due to gonorrhea, from which ninety percent of all men suffer at some time, and eighty-five percent of cases occurring in married women are contracted innocently from their husbands."

This is the damning charge. Is there anyone so narrow that he will not admit that our methods and our laws are inadequate?

As physicians, regardless of religion or politics, we are painfully aware of this lack, and know the impossibility of stemming the tide of disease under the present regime.

Emerson has said, where disagreement on many points between individuals is apparent, yet by selecting a common ground which raises no dissent, much progress can be made. I here present what seems to me a common ground. The brotherhood of alkalometrists is supposed to have a membership of some sixty thousand physicians; each of these must know, at the very lowest estimate, twenty persons sufficiently well to get them to sign a petition to congress advocating the appointing of a physician in every county to work in connection with the marriage-license office, to examine those who apply for permits as to their fitness for marriage, and if venereal disease exists, it must be cured before granting a license. Further, each couple passed should be made acquainted with the means to prevent conception till such time as they desire to have children. Next they should be supplied with literature explaining the terrible effects on the health of the woman in committing abortions, as well as branding it by its right name—MURDER.

A bureau should be established where information could be had for the asking, as to the functions of the sex-organs, how to care for them, and what their abuse would

lead to, and lastly—how to avoid contracting venereal diseases.

F. G. DESTONE.

San Francisco, Cal.

SOME PRACTICAL NOTES

I note in July CLINICAL MEDICINE requests for short notes on various troubles incident to the summer season. Here are a few:

Diarrhea (adult).—I put the patient to bed if he will consent. Withhold all food and allow little water for twenty-four hours. Calomel, gr. 1-3, every fifteen minutes for three doses, followed an hour later by a saline. Pain is controlled by hot applications. After the laxative acts I give the cotoin compound granule.

Teething season.—Allow only moderate quantities of food and see to its purity. Use every day a laxative syrup of prunes, figs and senna. Wash the mouth out twice daily with hydrogen peroxide solution. Once a week give a course of castor oil.

Colic (infantile).—Castor oil. Waugh's anodyne every ten minutes to effect. Warm applications. *Adult.* A grain of calomel at once, followed in an hour by a saline. For pain, chlorodyne 25 to 30 drops every twenty minutes for three doses. Rarely morphine hypodermically. Hot applications.

Typhoid fever.—I have had no typical typhoid since beginning alkaloidal medication. Formerly I employed practically "clean-up-and-keep-clean" treatment except that I used no defervescent or baptisin, but gave acetozone, 15 grains in solution every twenty-four hours. I had excellent success, but the acetozone was very expensive. The subsequent constipation was very troublesome.

High temperature (sudden) in infancy.—Usually I ascribe this to intestinal fermentation. I give at once calomel, gr. 1-10, every twenty minutes till a grain is given. An hour later castor oil. If much restlessness, I employ the hot bath to prevent convulsions.

Real cholera infantum I have as yet not encountered. For the ordinary summer diar-

rheas I employ preliminary cleansing of the primæ viæ (calomel, 1-10 grain, and castor oil, etc.); if severe, colonic flushing. Following this I occasionally use the sulphocarbolates, but am very partial to copper arsenite in the following combination: Copper arsenite, gr. 1-100, 8 granules; elix. pepsin, bismuth and strychnine, 4 ounces. M. Sig.: A teaspoonful in water.

Of course, if indicated, I add brucine, hyoscyamine, glonoin, atropine, etc. Food is withheld except barley water.

Nuclein.—I have not noted many reports on the use of nuclein. I find this agent one of the most useful at my command. In my experience it must be used intermittently to be of the most service. In two cases of pulmonary tuberculosis (incipient) I have given great relief from cough, expectoration, pain, etc., by calcium sulphide, 2 to 3 grains daily, with nuclein, 10 minims, morning and evening for a week, then dropping for a week. I have in several instances noted an aphrodisiac action.

R. W. HALLADAY.

Hurry, Alberta, Can.

[We are always delighted to get a "batch" of therapeutic notes like these. We hope that others will follow Dr. Halladay's example. Here is a lot of helpfulness crowded into very little space.—ED.]

MR. WOOTEN TO LEAVE THE N. A. R. D.

Physicians as well as pharmacists will be interested in the announcement that Mr. Thomas V. Wooten, secretary of The National Association of Retail Druggists, and the man who has done more than anyone else to build up this organization to its present strength and effectiveness, is to sever his connection with the Association to assume an important executive position with The Northwestern University School of Pharmacy.

We congratulate the University upon its ability to secure Mr. Wooten's services. He is a strong man and will strengthen any enterprise or institution with which he may be connected. As for the N. A. R. D.—may

it find a man who will perform the difficult duties of the position, soon to be vacated by Mr. Wooten, with the same kindly, generous and judicial spirit which has characterized his efforts in its behalf.

GOOD TO FASTEN TO: A COMMENT AND A FACT OR TWO

Lately I have dipped a little into the "active principles" and find them satisfactory. I have used the "trinity" and intestinal antiseptic quite freely and find them "good to fasten to," in fact aconitine is now my favorite antipyretic. It does the work in less time than any febrifuge I have ever used, and never fails, at least it has never failed me yet.

I like the compound sulphocarbolates very well, especially for children, though I do not use in the dosage recommended. For a child one year of age or over I never use less than a tablet at a dose, and by this dosage I get desired results in much less time than if given in smaller doses. (This may not be in harmony with Brother Abbott's idea, but it works first class and leaves no ill effects.) To patients from six years up to adults I give from two to five tablets at a dose, according to the severity of the case. My experience leads me to believe that this remedy is very good for ordinary cases, though not especially "powerful," and for severe septic conditions in adults a stronger, more toxic antiseptic should be used—lysol in 2-drop doses, well diluted, is excellent.

The calomel and podophyllin granule is far superior to the "open-market" product. I cannot praise it too highly, I simply did not know what a dependable remedy calomel was until I began to use this. I have found calx iodata almost a specific for croup, hoarseness and many "superficial" throat troubles. The doctor who has calx iodata and apomorphine in his case need have little fear of the enemy, croup. The effervescent magnesium sulphate is without a peer; the physician who once becomes familiar with its virtues will never be without it.

Apropos of Dr. Gilleran's remarks in the June issue, I believe that labels should give the name of the drug (and the exact amount contained in each tablet or dram) the manufacturer's name and address and a poison sign, and nothing more. For example:

CARBOLIC ACID

POISON

DOUGLAS & Co.

NEW YORK

I believe there is entirely too much information of a certain kind on labels and wrappers; I also believe that "circulars" and printed wrappers should not accompany bottles or packages of drugs. I never prescribe an original bottle for the above reasons. I dispense my own medicine, and when I want a particular "proprietary" medicine I send after it by messenger (or get it myself) and then pour it in one of my own bottles. If the manufacturing chemists would not use so much printer's ink on their labels and use unprinted wrappers doctors would be particular to prescribe original bottles, as it would be to their interest to do so; but as things now are it is to the doctor's interest not to prescribe at all. The successful doctor is the one who dispenses his own medicines.

Recently I had two cases of typical prurigo that came to me after being treated elsewhere without benefit. These cases were of three months' standing. I remember Brother Owen's remedy as described by him in the May issue of *CLINICAL MEDICINE*. I gave these patients a supply of calomel and podophyllin and saline laxative, and instructed them to return the following day for a "wash" which I would prepare for them. I got a good supply of the poke-root, but not liking the lye-soap idea, I left that out—and it "worked" just the same. These patients are now well and grateful. It would seem by this that all the remedial virtue is in the poke-root. My sincere thanks are due Brother Owen. I have since used the "poke extract" on minor wounds and abrasions and have found it quite satisfactory, though in some cases is "smarts" pretty badly.

M. B. RICE.

Udall, Mo.

["Dip in" again, Brother! We are sure that you will find many more things in active-principle therapeutics that are "good to fasten to." Then come and tell us.

Your experience with the sulphocarbolates bears out what we have many times said—that these salts are practically nontoxic. However, we have not found it necessary to use the large doses that you recommend. It all depends. The more thoroughly the bowel is cleaned out, the smaller the dose of the intestinal antiseptic. The calomel, podophyllin and saline are hard to beat for this purpose, but occasionally—no, frequently—the high enema must be resorted to in order to clear out all the fecal accumulation. Too often we neglect to examine the abdomen carefully and therefore "fall down."

While we think the sulphocarbolates the best intestinal antiseptic, for severe septic conditions (as in all kind of infectious and contagious disease) where there is a bacteremia to deal with, we advocate calcium sulphide. What can be accomplished with this remedy (provided a reliable supply is used) no one realizes who has not tried it himself. For instance, one of our office-force, a man of forty, who ought to have known better, came down with the mumps a few weeks ago. By all the "rules of the game" he should have had a very severe attack. But he filled up with calcium sulphide (cleaning out, of course), and though he had the swelling on both sides he was hardly sick at all, was not in bed a day, and in three days the trouble was practically over.

The label-problem is a vexing one—especially for the manufacturer, who is pulled this way and that by the differing opinions of his customers. The physician who dispenses usually wants *full* information on the label. To the man who prescribes it may be a matter of indifference, not because he is any "smarter" than the other fellow, but just because he never sees the original bottle, and for that matter, doesn't know even the color, taste or smell of what he may be giving. When the label is prepared for the doctor's aid, isn't it a good plan for it to contain as much as possible that may be of help to him? It seems so to us.

On the other hand, labels should never be prepared in such a way as to be a veiled "ad"—a mere "reach out" for laity business. What think our readers? What say *you*, Doctor?

The poke-root experience is interesting and will undoubtedly be of help.—ED.]

CHOLERA INFANTUM

Cholera infantum is an ailment peculiar to children from six months to two years of age and occurring mostly in the summer and fall months and in sickly seasons of the year.

The peculiar irritability of the stomach and bowels of children at this time of life makes them more liable to take on unhealthy action than at any other age. Affections of the stomach and bowels during the winter months are usually slight and of short duration; but those of the hot seasons are more protracted and more serious in their nature, sometimes proving fatal in a short time, while in other cases they are protracted to many weeks and even months until the little sufferers are reduced to living skeletons.

On account of the vomiting and purgation, cholera infantum bears some analogy to cholera morbus of adults; but the latter is not so violent or so rapid in its progress or so fatal in its tendencies, although both diseases may originate from the same or similar causes.

In cholera infantum sometimes vomiting continues without purgation, but generally the latter continues without vomiting. It is not uncommon for both symptoms to subside for six, eight or ten days with every appearance of a speedy recovery and then return or relapse.

The violence and danger of the attack is proportioned to the circumstances causing it and the constitution of the subject. The greatest prevalence and fatality of cholera infantum is in cities and in warm climates.

In the commencement of an attack of cholera infantum it is most prudent to suffer the spontaneous evacuations to proceed unmolested until the stomach and bowels have emptied themselves of their offending con-

tents (which is generally effected in from six to twelve hours—sometimes a shorter period), then proceed to allay the irritation of the stomach and bowels by means of mustard plasters applied over the stomach so as to stimulate without blistering, and the internal administration of small doses of paregoric (5 to 20 drops) or laudanum (1-4 to 1 or 2 drops) or essence of peppermint (3 to 6 drops in water) or cordial of any kind. Should vomiting or purgation run to excess, then check such discharges by the addition of some astringent, should the unnatural looseness of the bowel require it.

We not infrequently find thin, pale, watery discharges a very obstinate symptom, and in such cases, in addition to translating the irritation to the surface of the body by mustard plasters, we have found it necessary to use repeated doses of some vegetable astringent drink, such as a cold infusion of blackberry root, which we have found superior to any other article. This may be used alone, as a diet drink, or in the form of toddy (with any spirit) to which may be added an opiate if the presence of pain requires it.

Whenever the stomach rejects any of these remedies the manner of administration should be varied or after waiting a reasonable time the dose should be again repeated.

In some instances the irritability of the stomach prohibits the administration of any medicament. In such cases we should depend on the use of the mustard plasters to the stomach and bowels and the use of anodyne injections such as a little starch and laudanum or milk and laudanum.

The teething process being now in progress doubtless adds much to the increased sensibility and irritability of the child, and whenever any tooth is coming forward so as to be a marked source of irritation, the point of a bistouri may be passed through the gum, dividing the same for the passage of the new tooth.

The coldness of the extremities (so common an attendant) should be obviated by suitable covering or occasional frictions of flour of mustard on the skin.

If the patient does not begin to recover after using the above remedies for a few days

but continues to be out of tone or suffering from a feverish state, or seems weak or exhausted, then commence with suitable doses of quinine (1-20 to 1-4 grain), repeating the dose every two or three hours until there is a solution of the diseased action, a complete crisis, then lengthen the intervals to two or three times a day, and continue to use in this way until the little patient is reinstated to health and strength.

During the continuance of the warmer season children are very liable to relapse. To guard against this it is necessary to seek purer atmosphere, to pay attention to cleanliness, diet and exercise.

HUBERT M. S. KING.

New York.

[Dr. King has clearly had many opportunities for the study of this disease and he therefore writes from the practical standpoint. On all things, however, we can not quite agree with him. For instance, at the beginning of an attack of summer diarrhea we should not be inclined to wait for spontaneous evacuation of the bowel. In true cholera infantum we are dealing with an intense intoxication, due in most cases, probably, to a specific germ. We cannot get these germs and their products out of the bowel or neutralize their action too quickly. Therefore we prefer, at the very commencement of treatment, to empty the lower bowel with salt-solution enemas, often adding zinc sulphocarbolate. If there is much vomiting, use a soft rubber catheter as a stomach tube and wash out that viscus. If the copious watery evacuations of cholera infantum are allowed to continue they soon carry off the liquids of the body, which rapidly wastes, and the baby may be beyond help in a few hours.

Give small doses of calomel to help in the cleaning-out process—it's a good intestinal antiseptic, and it helps "settle" the stomach. Follow with saline lemonade. Sulphocarbolates by the mouth if the stomach will tolerate them—if not, small doses of copper arsenite. Ellingwood recommends for persistent vomiting repeated doses of ingluvin and bismuth, adding half a dram of each to

half a glass of cold water and giving a teaspoonful every ten, twenty or thirty minutes. If there is fever, aconitine. To this (or aconite) the eclectics add ipecac in very small doses. Ellingwood says that he has controlled many cases in the first thirty-six to forty-eight hours by these two remedies alone in connection with the bowel washing.

If there is nervous excitability, muscular twitching or threatening convulsions, try gelseminine. But the remedy for cholera infantum is atropine, and this can be given hypodermically when the stomach will tolerate nothing. Substitute hyoscyamine when a more decided sedative effect is desired. Atropine is always indicated with the cold extremities and the pallid skin which is so frequently seen in these cases. Brucine is usually required to reestablish the tone to nervous system and circulation.—ED.]

THE SAFETY OF THE INFANT THE HIGHEST LAW

In opening this subject to the readers of our noble journal, I will say that the physician who is the most successful infant-feeder is generally the most successful physician in treating diseases of infancy. We must remember that the changes that are going on in the infant's body in the metabolism of food to the needs of its body are many and rapid. When we see more growth in the infant's brain in the first year than in all the rest of its life, why should we wonder at the delicate condition of our little one's nervous system, including brain and bowels? And these two organs seem to be the most involved in the diseases of infancy.

I believe that a thorough knowledge of the chemistry of food and how to apply this food to the physical needs of the infant's body is a matter that we physicians should study more than we do. When this is done there will be more harmony between the drugs we are giving and the food we are using, and the result will be more favorable.

Suppose we are called to treat a case of diarrhea in an infant, caused by too much fat in the food. We lessen the fat in its food at once, hoping to remove the cause,

and remembering at the same time that the function of the pancreas has not commenced its work in the infant's life in the process of emulsifying the fats that they may be more nutritious to the growth of the infant's body.

Yes, there are many things in the infant's life that we do not find with the adult, and it is these differences that we must keep in view if we wish to be a success in the treatment of children. There is a great difference in the arrangement of the portal circulation of the liver and also the size of the liver with the infant. The liver of the infant is one percent larger than the liver of the adult in proportion to the weight of its body. It is said by good physiologists that the bile does not aid in digestion in the infant's economy as it does with the adult.

There is another nice arrangement in the laws of nature with the infant that seems to come in play just at the right time in life, and that is that the incisors, or front teeth, make their appearance just at the time when the infant is leaving the breast food and commencing table foods. At this stage of the child's life also the functions of the pancreas commence to secrete the pancreatic juice which aids the infant's digestion. Thus we see a harmony in the chemical action and a physiological function, and all for the benefit of the infant.

We are learning that condensed milk is easy for the infant to digest but poor in nutrition for the growth of the infant, hence we must use judgment.* We know that these foods are short in fats and lime salts and where there is a tendency to rickets their use must be very limited. Again, the prepared foods are strong in albuminoids. In many cases they are predigested in order to make it easy on the infant's stomach. This is often wrong, as I believe the infant's stomach is made stronger by having some labor to perform within the use of good judgment.

The next question is: when shall we wean the child? This is all governed by circumstances, the health of the mother, of the child, and by the season of the year. If the health of the mother is poor and the health of the baby is fair we are justified in weaning the baby and saving the mother. On

the other hand, if the child is not doing well at its mother's breast, then wean the child. My experience has been that all sides of conditions must be measured, and then act according to evidence found. It seems the infant's power to convert starch into sugar is very limited.

I believe that the science of infant feeding will be in the curriculum of our best medical schools in the future. From birth to the end of the first year food is the major question of the infant's life. The quantity and quality must be scaled according to each case. It is said the hand that rocks the cradle is a strong factor in fixing the destiny of our country. If this be true, let us see that every mother's hand is guided by an educated mind. Then may we have a stronger race of people.

The question of a wet-nurse is a much agitated one. Under the conditions of our country I should prefer to have the child in the hands of a scientific infant-feeder. I will close by the same motto as I began, *Salus infantum suprema lex*, or "The safety of the infant is the highest law."

W. A. FERGUSON.

Brighton, Ind.

TRI-STATE MEDICAL SOCIETY MEETING

The sixteenth annual meeting of the Tri-State Medical Society of Illinois, Iowa and Missouri will be held this year at Ottumwa, Iowa, September 8, 9 and 10. The president of the society is Dr. G. O. Cuppidge, of Moberly, Missouri. A splendid program has been provided and the attendance should be fine. An opportunity will be given to hear some of the best men in the three states. The following papers are promised:

"Is Suprapubic Drainage Ever Justifiable in Operations for Pus-tubes?"—Felix William Garcia, St. Louis, Mo.

"An Important Consideration in the Treatment of Pyosalpinx."—Austin E. Palmer, Morris, Ill.

"Some Aspects of Prostatic Disease."—F. Kreissl, Chicago, Ill.

"The Home Treatment of Tuberculosis, with Special Reference to the Free Dispensary."—Clarence L. Wheaton, Chicago, Ill.

"Early Diagnosis and Curative Treatment of Pulmonary Tuberculosis."—L. Drakely Rood, Des Moines, Iowa.

"Treatment of Tubercular Sinuses and Fistulous Tracts."—James W. Cokennow, Des Moines, Ia.

"Operative Treatment of the Fixed (Rigid) Flat-foot."—Frederick Mueller, Chicago, Ill.

"Ethical Fakers."—Clarence Martin, St. Louis, Mo.

"Surgical Treatment of Tetanus."—Wilbur F. Sterman, Winterset, Iowa.

"Two Cases of Spermatic Hernia. Operation. Recovery."—Joseph E. Chambers, St. Louis, Mo.

"Treatment of Surgical Infections."—Walter Urban Kennedy, St. Louis, Mo.

"Cholelithiasis."—Benjamin A. Arnold, Freeport, Ill.

"Pathology of Gall-bladder and Its Value in Determining the Choice of Operation."—Emil Ries, Chicago, Ill.

"Indications for Cholecystectomy."—William Jepson, Sioux City, Ia.

"Treatment of Cholecystitis."—Bayard Holmes, Chicago, Ill.

"Report of Three Cases of Ectopic Gestation Occurring in One Family. Operation. Recovery."—Edgar P. Ward, St. Louis, Mo.

"Facts, Fancies and Fallacies."—George Phillip Neal, Ft. Madison, Iowa.

"The Newer Alkaloids and Some of Their Therapeutic Possibilities."—Wallace C. Abbott, Chicago, Ill.

"Brain Tumor."—Joseph Geiger, St. Louis, Mo.

"Abortion: Its Causes, Complications, Sequelae and Treatment."—Channing W. Barrett, Chicago, Ill.

President's Address: "Recent Progress in Medicine and Surgery."—Godfrey Oldfield Cuppaide, Moberly, Mo.

"Some Points on Infant Feeding."—Alfred C. Cotton, Chicago, Ill.

"The Social Evil from the Standpoint of the Clergy."—Rev. J. R. Locke, Ottumwa, Iowa.

"What Can be Done in the Way of Prevention of the Spread of Prostitution."—Adelaide Thompson, Kansas City, Mo.

"Prevalence, Causes and Possible Repression of Prostitution in the United States."—Emory Lanphear, St. Louis, Mo.

"Discussion of the Above from the Standpoint of a Sociologist."—G. Frank Lydston, Chicago, Ill.

"The Protean Nature of Syphilis."—O. Le Grand Suggett, St. Louis, Mo.

"Deformity and Scar Attending the External Operation for Frontal Sinus Disease."—Arthur E. Prince, Springfield, Ill.

"Treatment of Frontal Sinus Suppuration."—Harold Bailey, Waterloo, Iowa.

"Glaucoma."—Flavel B. Tiffany, Kansas City, Mo.

"Operations for Cataract."—James Moores Ball, St. Louis, Mo.

"Cosmetic Surgery."—Charles C. Miller, Chicago, Ill.

"State Care of Crippled and Physically Deformed Children."—Jennie McCowen, Davenport, Ia.

"Observations on Round Ligament vs. the Suspension Operation for Retrodisplacement."—Franklin H. Martin, Chicago, Ill.

"Food Eruptions."—A. H. Ohmann-Dumesnil, St. Louis, Mo.

"The Psychological Factor in the Cure of Disease."—Penn W. Ransom, Rockford, Ill.

"Autotoxemia and Its Relationship to Nervous Diseases."—George F. Butler, Wilmette, Ill.

"Some Suggestions in Neurological Therapeutics."—Daniel R. Brower, Chicago, Ill.

"Postpartum Hemorrhage: Etiology, Diagnosis and Treatment."—Edward P. Hummel, Charles City, Iowa.

"Pregnancy and Heart Disease."—Carey Culbertson, Chicago, Ill.

"The Prostate as an Etiological Factor in Nervous Disease."—Joseph L. Boehm, St. Louis, Mo.

"Emergency Surgery."—Alfred O. Williams, Ottumwa, Iowa.

"Some Commonly Unrecognized Sequelae of Nasal Obstruction."—Oscar F. Baerens, St. Louis, Mo.

"Why We do Not Get the Best Results from Digitalis."—Joseph M. Patton, Chicago, Ill.

"Medical and Legal Insanity Compared."—Gerchom H. Hill, Des Moines, Iowa.

"Some Valuable Uses of the Supra-Pubic Trocar."—William T. Belfield, Chicago, Ill.

"Unusual Cases Met in Country Practice."—G. R. Neff, Farmington, Iowa.

"Some Practical Points in the Management of Nephritic Cases."—Alfred C. Croftan, Chicago, Ill.

"Appendicitis: Unusual Locations and Complications both Preceding and Following Operation."—Cassius C. Rogers, Chicago, Ill.

"Therapeutic Management of Typhoid from Beginning to End."—Charles F. Walker, Ft. Madison, Iowa.

"Typhoid Fever in Country Practice."—Daniel O'Doherty, Charlotte, Iowa.

"Some Recent Observations in the Cathaphoric Application of Electricity."—C. S. Neiswanger, Chicago, Ill.

"Tumors of the Breast."—David C. Brockman, Ottumwa, Iowa.

"Report of Cases from my Surgical Clinic."—Christopher C. Morris, St. Louis, Mo.

"Strictures of the Rectum."—Joseph B. Bacon, Macomb, Ill.

"Indications for the Interruption of Pregnancy."—Laura H. Branson, Iowa City, Ia.

"Considerations which Influence Mortality in Surgical Undertakings."—A. Augustus O'Neill, Chicago, Ill.

"Should the General Practitioner do Major Surgery other than Emergency?"—Arthur J. Weaver, Muscatine, Ia.

"The Ideal Incision for Appendectomy in Woman?"—Bertha Van Hoosen, Chicago, Ill.

"Chorion-Epithelioma of Pregnancy."—Coral R. Armentrout, Keokuk, Iowa.

"Wear and Tear."—Elbridge H. King, Muscatine, Ia.

"Intracranial Complications of Otitic Origin."—Lee Wallace Dean, Iowa City, Ia.

"What is the Attitude of the Medical Profession on Division of Fee between Specialist and General Practitioner?"—Emory Lanphear, St. Louis, Mo.

[Splendid program! We hope everyone of the "family" who can do so will make it a point to attend.—ED.]

IS IT ELEPHANTIASIS?

The case of elephantiasis reported in the June number is very similar in appearance, though quite different in etiology and pathology, to a case I will report for comparison, as I consider it a rare and interesting case:

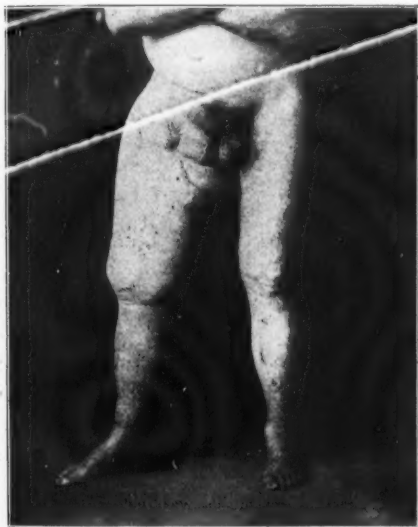
Mr. J. H. Age 58, of American parentage, family history good. Trouble first began

the limb has attained the size shown by the following figures and photographs:

	Right	Left
Ankle	12 in.	9½ in.
Calf	19 "	15 "
Knee	25 "	17 "
Just below knee.....	18 "	14 "
Middle of thigh	29 "	21 "
Highest part of thigh ...	35½ "	23 "

No history of trauma or any other illness except that he had had inflammatory rheumatism in this limb about eight months before the first tumor began to grow.

No pain in the leg until after the last operation, since when he continually has had tingling sensations, rushing to toes, and jerks all over at times. The leg begins to burn, then he begins to shake all over for two hours, as if it would shake the flesh off of his bones. He gets very thirsty during these chills but shakes so severely that he cannot drink. Chills came on about every



Front view of Dr. Brooks's Case

about twelve years ago when he could feel a small tumor in the soft tissue of the upper front part of the right thigh, which grew very slowly for four years and then more rapidly for a year, when he had it cut out, it then being about the size of the fist. After this operation it did not grow much for a year, but in three years from the first operation he again had the tumors removed from the upper front part of his thigh, as they were again growing more rapidly. In the three years since the last operation



Rear view of Dr. Brooks's Case

two months ever since the last operation, but lately they are coming once a week. He always has a little fever for a few hours following the chills. The leg gets blue after each chill or if he stands on it long at one time. Sharp lightning-like pains dart from below the knee up into the thigh. The up-

per, or tumored, portion of the thigh is never sore or tender, but the pressure-symptoms of tingling and numbness bother. Aside from this leg the man is apparently healthy and well nourished. His usual weight was 185 pounds, but now he weighs



The home of Dr. A. F. Wright

237 pounds. Pulse is 72. What is your opinion in regard to a high operation?

E. W. BROOKS.

Charleston, Ill.

[This condition is probably one of elephantiasis, though not *specific* elephantiasis, due to the presence of the *filaria sanguinis hominis*, the common cause of the disease in the tropics. Anything, whether external or internal to the vessels, which causes lymphatic obstruction may produce the disease. The principal external causes, according to Keen, are "pressure from a neoplasm, cicatricial contraction, the extirpation of the lymph-nodes of a given set of vessels or the ligation of such a group of lymphatics. Of the internal causes, there should be mentioned the presence of cancerous or tubercular material in the vessel." This may give the key in this case. As to operation—we'll ask our surgeon-readers to give us an opinion.—Ed.]

RHEUMATISM: PUPILLARY REFLEXES

I see in your June number a request for more pictures, so I enclose two; one of my house and office to the right of entrance, and

one of the mill-dam here. This is built of concrete, is 180 feet long, 12 feet high, and 2 feet thick at the top. You see it is there to stay.

I am enjoying and profiting very greatly by your Postgraduate Course. Here is a discrepancy I should like to have explained. In your "Digest," 1904, article on rheumatism, page 66, you recommend continuous applications of cold. In a recent lesson such applications are condemned as being harmful. However, I used them in a case of inflammatory rheumatism last winter, and with good results.

Another thing. In your article on facial appearances you say, "contracted pupil in spinal or cerebral excitation." I have seen several children in convulsions in my six years of practice and invariably the pupils were widely dilated. The convulsions so far



A beautiful spot near Sterling, N. Y.

as I can remember were caused by errors in diet, but there must be the cerebral excitation to cause the convulsion. Am I wrong in attributing the convulsion to cerebral irritation?

A. F. WRIGHT.

Sterling, N. Y.

[The discrepancy is explained in this way: The hydrotherapeutic part of the Postgraduate Course is written by Dr. Otto Juettner of Cincinnati. His views on some subjects are somewhat at variance with those of most authorities, even our own in some

instances. This is notably true in regard to the method of the use of hot applications instead of cold baths in the treatment of sun-stroke. He is a safe man; but we can both of us safely disagree with him on many things, even on the treatment of inflammatory rheumatism.

As to the appearance of the pupil, the phenomena of dilation and contraction are not quite so simple as our explanation might make it appear. The iris is under the influence of two sets of nerve-fibers: stimulation of the motor oculi, or third cranial nerve, causes constriction of the pupil; stimulation of fibers from the cervical sympathetic, arising in the floor of the third ventricle, cause dilation. The sympathetic of the child is very sensitive to stimulation, hence a comparatively slight toxemia may be sufficient to excite not only the convulsions but cause pupillary dilation.—ED.]

HAY-FEVER: A NOVEL TREATMENT

You ask, "Who has something to say?" I thought I had my say on that subject four years ago, but if you will permit I might as well "say again." For years I suffered torture during June and early July. I tried various methods of treatment. In 1903 I was graduated from the McGill Medical School. After I got home I had my annual attack. I began to think of the familiar saying, "Physician heal thyself," and so I set to thinking. Why should I suffer in mid-summer and at no other season of the year? Was there any exciting cause present at that time and at no other? As for hay, I would sleep in it at any other season. No man enjoys the perfume of roses better than I. But it occurred to me that the sun was highest and its rays the strongest at this season. I knew a man who, if he wanted to sneeze, had only to look at the sun. Would smoked glasses help me? I would see. So I went to an optician friend of mine and asked for a pair, put them on, turned to the light, and presto! relief!

That year I published a report in *The New York and Philadelphia Medical Journal*. A reporter of the "only" paper in New York

City asked for an interview and gave me a column, written of course to suit his ideas.

The next year I used auto goggles provided with smoked glasses, as by that means I was able to shut out all the light not coming through the glass. I have worn these each summer since until this one, when I am not obliged to wear them. The number of dark glasses worn in my city is a wonder to me and seem to increase each year. I have had many reports of relief all over the country and many inquiries, some on post-cards and some even enclosing a two-cent stamp.

Now what is hay-fever? It is a functional nervous disease. Its fever is the fever of excitement. Its causes may be many but are only exciting causes. They act only as irritating stimuli and not as chemical toxins, as the poison-oak, or ivy as we call it here, and which, let me add, I can always cure by applications of saturated solutions of sodium bicarbonate, allowed to remain on. The results of the poison come on fairly slowly and last for some time, and the effect is fairly continuous, whereas an attack of hay-fever is paroxysmal like a fit of anger, and often, when one gets in a cool, shady place, he feels better at once.

The hot weather, especially if no breeze is stirring, may be an exciting cause. Hence keep cool. The sun certainly is an exciting cause, so wear smoked goggles. If hay or ragweed or roses annoy you, keep away from them if you can. If there is any abnormality in your nose, have it corrected. But above all, remember that hay-fever is a functional disease, that it indicates a weakness in your nervous system, that you should not have it, and try to fight it with all your will-power.

FRANK E. STOWELL.

Worcester, Mass.

DANGERS IN PRESCRIBING ALCOHOL

While on a visit to the great Hot Springs of Arkansas my attention was called to a certain woman we passed on the street. I think her face and general appearance were the most haggard I have ever witnessed, indicating dissipation, poverty and vice. A

brother-physician informed me that she had previously been a contented wife and mother, well connected and in comfortable circumstances; also that her downfall began when (and as a result of it) a certain physician (?) prescribed for her a certain "malt whisky" widely advertised in the secular press.

Would it not be well for us all to be very careful in this respect, and not have the blood of some poor victims crying unto God against us?

L. H. LIPSEY.

Wynne, Ark.

[It certainly would. We cannot be too careful in giving alcohol, in any form. Why should we give it? There are plenty of better remedies.—ED.]

WE WANT TO KNOW

If the Roentgen rays, that are now way ahead,
Will show us in simple note
How, when we ask our best girl to wed,
That lump will look in our throat?

If the cathode rays, that we hear all about,
When the burglar threatens to shoot,
Will they show us the picture, without any doubt,
Of the heart that we feel in our boot?

If the new x-rays, that the papers do laud,
When the ghosts do walk at night,
Will they show, 'neath our hat, to the world abroad,
How our hair stands on end in our fright?

If the wonderful new electric rays
Will do all the people have said,
And show us quite plainly, before many days,
Those wheels that we have in our head?

If the Roentgen, cathode, electric, x-light,
Invisible, think of that,
Can ever be turned on the Congressman bright,
And show him just "where he is at"?

Oh, if these rays should strike you and me,
Going through us without any pain,
Oh, what a fright they would give us to see
The mess which our stomachs contain!
HOMER CLARK BENNETT.
Lima, Ohio.

THE ALABASTER BOX

"Do not keep the alabaster box of your love and tenderness sealed up until your friends are dead. . . . Flowers on the coffin cast no fragrance backward." (Anon.)
What! dead, did you say? The friend you knew?
Gone forever from Life and Love?
And the only thing that is left to do,
Is to send him flowers he knows not of?

You did not think while he lived, perhaps,
To speak the word that would help and cheer;
But do not grieve o'er the trifling lapse—
Just scatter flowers about his bier.

He missed their fragrance a year ago
And longed for a helpful word from you—
For the bluff goodwill by which man-friends show
Their hearts are right though their words are few.

But now this beauty is all a loss,
So, too, your praise of the work he's done—
What might have helped him to bear his cross
Is wasted now that his race is run.

Oh, why was the alabaster box,
And the wonderful gifts it bore,
Withheld till his life-boat struck the rocks
And he needed its help no more?

What use to him was the love unspoke?
What availeth our vain regret?
We kept our flowers till the sad heart broke,
Then sent them, too late, tear-wet.

Oh, give me a coffin without a flower,
A funeral with naught of praise,
But keep my life from one unloved hour—
Let friendship grace all my days.

EMMA TOLMAN EAST.

Denver, Colo.

HERNIA IN GRAVID UTERUS

A ventral hernia, following imperfect closure of an abdominal incision or from any other cause, when located low—near the symphysis pubis—may be found to contain the gravid uterus; very rarely it has been found both in inguinal and femoral hernia. When the opening through which the hernia protrudes is quite small and the hernia remains unreduced it is quite evident that most serious trouble may arise as the fetal development progresses. Therefore the necessity for very early reduction by taxis and maintenance of normal conditions by properly adjusted truss or other appliance. When the mass cannot be returned to the belly by taxis delay should not be tolerated, for sooner or later there will be strangulation and death of the fetus, with its complications, or gangrene of the uterus, with fatal termination. Hence early radical cure must be done—there is no excuse for delay. Should, by any chance, pregnancy advance to near the end of term before the trouble is discovered there is but one proper procedure: cesarean section.



CLINICAL · MEDICINE POST-GRADUATE SCHOOL *of* THERAPEUTICS

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PART I.—LESSON EIGHT

ELIMINATION (Continued)

THERAPEUTICS OF CONSTIPATION (Continued)

Saline Cathartics.—Purgatives of this class have a peculiar mechanical action which depends on their saline properties. They are extremely difficult of absorption, but remain in the intestines and by their presence act on the mucous membrane, causing an increase of secretion. But this is only a part of their action. As the natural secretions are poured out, these purgatives prove their affinity for water, which prevents their reabsorption and thus they increase the liquid part of the feces. Their action is analogous to that of an enema. As they do not increase the secretion of the intestinal juices they are not followed by constipation. These are true hydragogs, as they produce a flow of water. They act rapidly, producing little or no griping and are not followed by prostration.

Saline cathartics are very useful where the dejecta are scanty in quantity and dry, as in the case of drunkards; also to remove accumulated feces and irritating matters in the intestines, *except* when they have produced inflammation. The salines greatly augment the amount of fluid in the intestinal canal. This increase of fluid is not a secretion, but

is due to the high osmotic equivalent of the salt which tends to draw the fluids of the body into the intestines while hindering to a certain extent the absorption of fluids from the intestines. The osmotic current toward the salt is greater than the current toward the tissue, provided the salt is in a solution of certain concentration, the purgative action being due to the mechanical action of the fluid in the intestines.

Save the sulphate and phosphate of sodium, which are mild hepatic stimulants, the salines have but little effect upon the biliary secretions. The sodium salts are more efficient than the potassium salts as purgatives, owing to their higher osmotic equivalents.

Purgation by the salines is painless, and occurs usually in from two to three hours after administration, there being ordinarily two or three watery evacuations. In cases of habitual constipation, particularly that associated with the gouty diathesis, there are no better purgatives than the salts of sodium. For children an excellent purgative is sodium phosphate, especially where the stools show a deficiency of bile. In duodenal catarrh excellent results are obtained by this drug, also in chronic rheumatism.

Saline purgatives in concentrated solution are efficient remedies for the removal of dropsical and pleuritic effusions. Magnesium sulphate combined with sulphuric acid is the most efficient treatment in cases of chronic lead poisoning. Rochelle salt (and seidlitz powder) is a useful purgative in cases of biliousness, migraine, etc. Solution of magnesium citrate is used for the same purpose, but, while very palatable and acceptable to the stomach, is not always reliable, besides being liable to cause slight griping. The saline purgatives should be taken in the form of concentrated solutions in water, and ordinarily should be administered in the morning when the stomach is empty. The prolonged and excessive use of this class of drugs is to be avoided, for by preventing the reabsorption of the intestinal juices they impoverish the blood. On account of their refrigerant action they should not be given in chlorosis, jaundice, Bright's disease or any exhausting or depressing disease. Their effect in many instances is increased by adding small doses of quinine. When given in small doses they act as diuretics. The saline cathartics are contraindicated in fevers when iron is administered, as they prevent the absorption of the latter.

In the case of magnesium sulphate we find that if this purgative salt be given to a person just after he has risen in the morning, it will cause a free fluid evacuation in the course of an hour, but if the patient takes the dose just as he awakes and lies still for an hour or so afterward, it is very likely that he will not get an evacuation of the kind desired. Instead of just one full, free, watery evacuation, the probability is that he will have two or three scanty, insufficient, and perhaps painful, evacuations during the course of the day. The reason is that a large quantity of the fluid which he has drunk or which is secreted under the stimulus of the salt is reabsorbed by the intestines so that it does not pass out *en masse*. As the fluid which remains becomes more reduced and more concentrated, it gives rise to pain, whereas a single dose on rising will give a free evacuation and no pain at all. This frequently is a great puzzle to patients.

They tell you that on some occasions they have taken magnesium sulphate, or some saline laxative, and it has had this disagreeable effect, whereas they say it used to suit them perfectly well. The probability is that when they took it previously they arose immediately afterward or took it after they had risen, instead of lying in bed for some time after taking. Thus it is well to remember that in the case of the saline laxatives one must expect the effect to be much less powerful, and probably also much less agreeable, if the patient remains recumbent for a while after taking the medicine.

In order to obviate such a failure of the saline laxative to do its full duty it is usual, or it may be wise, to combine it with some purgative which will act upon the movements of the intestine and upon the liver. There is no better combination than one of magnesium sulphate and colchicine, which is a powerful hepatic stimulant. You can readily see that if you sweep away all the bile that is formed and that which is poured into the intestine, you will get a smaller quantity poured out from the gall-bladder; more especially will this be the case if by the action of your purgative you remove not only any bile that may be present in the intestine, but also any substances from which bile may be formed, namely, all the half-digested food, which would yield biliary products.

Saline laxatives are intended for occasional use only, not for habitual use, yet it is well known that small doses of magnesium sulphate may be given for a long period of time without doing any harm. Indeed Hemmeter speaks highly of the effects of the waters of Bedford Springs, Pa., and says it is one of the few mineral waters which can be taken for a long time without harm. He explains this by the fact of its slight purgative action in consequence of the relatively small amount (ten grains to the pint) of magnesium sulphate present in the water. We have known of patients who have taken small doses (one-half to one teaspoonful) of the effervescent magnesium sulphate every morning for a number of years, and no bad effects have resulted.

Many patients believe that the larger the dose or the more drastic the purgative, the greater will be the benefit derived from its use. Exactly the reverse may be said to be true in the case of the saline laxatives, as magnesium sulphate. In the case of this remedy, a small dose dissolved in half a tumblerful of water, sipped slowly while dressing in the morning, will usually occasion one copious and easy evacuation immediately after breakfast. The dose can be regulated to a nicety, and it can be taken month after month, without the slightest risk of exciting a catarrhal condition of the intestine.

DIURETICS

Mode of Action.—Diuretics are drugs which increase the flow of urine. Considered in a broader sense, however, these agents augment the secretion and modify the character of the urine. This they do (1) by increasing the amount, (2) by rendering the urine acid, (3) by rendering the urine alkaline, (4) by removing waste-products or increasing the solid constituents of the urine, (5) by preventing decomposition of the urine.

The power to prevent decomposition of the urine is peculiar to benzoic and salicylic acids, cubeb, copaiba, uva ursi, oil of sandalwood, volatile oils, saccharin, salol.

Lithontriptics.—The following medicines affecting the urinary system are called lithontriptics because of their power to prevent the formation of concretions in the urinary passages, or to dissolve them when formed, viz.: piperazine, potassium salts, lithium salts, ammonium benzoate, benzoic acid, dilute nitric acid. Among the principal drugs which render the urine acid are benzoic and salicylic acids and many of their salts, large doses of the vegetable acids and sour wines. The alkalis, particularly the potassium and lithium salts, when taken internally render the urine alkaline in reaction.

The Effects of Diuretics may be either direct or indirect, that is, they may act on the kidneys themselves or upon certain structures outside the kidneys. The structures in the kidneys that have to do with the elimination of water, solids, etc., are, first, the malpighian tufts which eliminate principally water, but also mineral salts and certain pathological and foreign substances

TABLE SHOWING MODE OF ACTION OF DIURETIC DRUGS

Raise arterial pressure	Generally	Increase cardiac action	<ul style="list-style-type: none"> Digitalis Alcohol
		Cause general vascular contraction	<ul style="list-style-type: none"> Digitalis Strophanthus Squill Scoparius Convallaria Strychnine Caffeine Erythrophleum (Cold to the skin)
Locally on kidneys	Contract efferent vessels	Act on the vasomotor-centers	Same as above?
		Act locally on kidney	<ul style="list-style-type: none"> Scoparius Buchu Uva ursi Juniper Turpentine Copaiba Cantharides
	Dilate efferent vessels	Act either on vasomotor-centers or locally on renal vessels	<ul style="list-style-type: none"> Nitrites Alcohol
Act on secreting nerves and renal cells	Increase water excreted		<ul style="list-style-type: none"> Urea Caffeine Diuretin Calomel Colchicum Liquor potassae Potassium acetate Potassium citrate Potassium nitrate Sodium citrate and other salines.
	Increase water and solids excreted		<ul style="list-style-type: none"> Water, locally bleeding, dry cupping, warm fomentations.
By simple mechanical action			

which may be present; second, the glandular epithelium lining the convoluted tubules which excrete waste-products such as urea; third, the constricted portion of the tubules serving to prevent the too rapid escape of water, thus allowing time for its absorption in cases where it is desirable that the water be retained in the system.

The functional activity of these various structures are regulated by the nervous mechanism through its influence upon the blood-supply. For example, the supply of blood to the glomeruli is influenced largely by the size of the blood-vessels, this being regulated by the vasoconstrictor and vasodilator nerves; and the activity of the secreting cells is increased or diminished according to as they are controlled by the secretory or inhibitory nerve-fibers.

Diuretics act (1) by increasing the general blood-pressure, (2) by causing local dilation of the renal arterioles, (3) by directly stimulating the glandular secreting renal structures, (4) by simple mechanical force. The foregoing table, modified from Brunton's work on "Pharmacology, Therapeutics and Materia Medica," serves to elucidate the methods by which the various diuretic agents probably exert their influence.

Relation of Skin and Bowels to Kidneys.—The secretion of urine is considerably influenced by the activity of the skin and bowels; for instance, when the cutaneous glands are stimulated and there is free perspiration, a diminished urinary secretion ensues. The functional activity of the skin and sudoriparous glands depends greatly upon the amount of blood supplied to them. Whatever augments the flow of blood to these structures increases the secretion of the sweat-glands. Consequently external warmth dilates the cutaneous blood-vessels and promotes diaphoresis, while cold contracts the cutaneous vessels, diverting the flow of blood to the internal organs, thereby increasing the secretions from the kidneys and lessening that from the skin.

It will be seen, therefore, that the functions of the skin and kidneys are compensatory, the compensation being also partially observable in the mutual relations between

the bowels and kidneys. It is well known that when there is active purgation, with frequent watery movements from the bowels, the amount of urine secreted is proportionally diminished.

Any drug which increases the general blood-pressure and forces a larger blood-supply into the kidneys augments the pressure in the glomeruli, distending the capsule and enlarging the area of the osmotic membrane, while cactus, combined with an increase in the circulation, promotes and facilitates filtration, thereby augmenting the amount of urine.

The membrane lining the inner capsule of the glomerulus is covered with a single layer of cubical epithelium possessing a secretory function, rendered more active in accordance with the physiologic fact that the greater the blood-supply to a gland or secreting structure, the greater its functional activity.

The blood-pressure in the glomeruli, as has been said, may be increased by additional pressure in the general circulation. It may be raised also locally through dilation of the afferent blood-vessel supplying the malpighian corpuscle, or contraction of the efferent vessels, allowing a smaller quantity of blood to escape from the glomerules.

The secreting structures of the convoluted tubules are stimulated by the influence of certain drugs which are carried in the blood, acting as excitants upon the secreting cells. This necessarily requires an extra supply of blood to the part furnishing material for the extra secretion.

The imbibition of large amounts of water, while increasing the blood-pressure to some extent, mechanically increases the amount of water eliminated by the kidney. This is commonly known as the "flushing action" and it renders the urine more dilute. In congested conditions of the kidneys certain remedial measures, such as local venesection, dry cupping, warm fomentations, etc., promote renal secretion.

Diuretics are employed to effect any one of the following objects:

1. To remove excessive accumulation of fluid in the tissues and serous cavities of the

body when the blood-pressure is low. For this purpose the most efficient service is derived from the use of drugs which act by increasing the systemic blood-pressure and stimulating the secreting cells of the kidneys. Ordinarily the agents most beneficial in cardiac dropsy or dropsies due to venous congestion are digitalis, calomel, sparteine, scillitin, diuretin, apocynum.

2. To remove excessive fluids from the body when the blood-pressure is about normal, as in cases of hepatic cirrhosis with dropsy. The remedies found to be most efficient in these conditions are diuretin, copaiba and calomel, although frequently saline purgatives, by ridding the peritoneal cavity of excess of water and preventing the accumulation of fluid by lowering the abnormally high blood-pressure in the portal circulation, prove more beneficial than diuretics.

3. To remove water from the blood when the arterial pressure is abnormally high. For this purpose diuretics are indicated in the early stages of many acute diseases, such as the eruptive fevers, tonsillitis, bronchitis, etc. In these cases agents which dilate the cutaneous blood-vessels, such as spirit of nitrous ether, should be employed. Diaphoretics and cathartics are likewise beneficial.

4. To remove from the blood injurious waste-products and poisonous substances. For this purpose drugs which stimulate the convoluted tubules and increase oxidation should be given, such as potassium nitrate or bitartrate, the lithium salts, turpentine, juniper, diuretin, and the remedies mentioned under "lithontriptics."

The foregoing remedies will be found useful in diseases associated with rheumatic, gouty and uric-acid diatheses, as well as in many acute diseases where there is rapid accumulation of deleterious, retrograde material.

5. To lessen the acidity of the urine. The alkalis and the alkali salts of the organic acids are the most useful agents for this purpose, being serviceable in such conditions as gonorrhea and acute inflammatory states of the genitourinary tract. In de-

bilitated conditions there is quite often an excessive acidity of the urine, irritating the mucous membrane and causing frequent micturition. In such cases the alkaline diuretics or alkaline mineral waters are of service.

6. To increase the acidity of the urine. This is necessary when, from any cause, there is ammoniacal decomposition of the urine, as in cystitis. In such cases benzoic acid is probably the most beneficial remedy, though the salicylates, salol, the volatile oils, etc., may also prove useful.

7. To prevent the formation of urinary concretions or to dissolve them when formed, as in cases of renal calculi, etc. For these purposes the drugs included under "lithontriptics" are the most efficient:

8. To dilute the urine. This process is necessary to prevent the deposit of urinary solids from forming calculi in the kidneys or bladder. For this purpose water or the alkaline mineral waters, taken in large quantities, will prove most useful. Salines are of great value here, when it is necessary to open up the bowel. The calcium and lithium salts are also of great value, when taken together in plenty of water, three or four times a day.

Special Precautions.—Diuretics are often very uncertain in their action, in health many of them apparently exerting no influence upon the kidneys, and in diseased conditions not infrequently proving inert. They are more certain in their action when employed in combination, that is, a union of drugs which act both generally upon the systemic circulation and locally upon the various secreting structures of the kidneys.

Diaphoretics, being diverse in their action, should not be given with diuretics.

When administered, diuretics should be freely diluted with water. The patient's skin should be kept cool and the bowels prevented from acting too freely, in order that the full benefits of this class of remedies may be obtained.

Classification of Diuretics.—Fothergill classes diuretics under two divisions, viz., (1) those which act upon the vascular system, and (2) those which act upon the kidneys. His explanation of the combination

of diuretics is very lucid and worthy of quotation. Drugs of the *first division* he sometimes entitles:

"Hydragog Diuretics."—This division includes digitalis, strophanthus, squill and broom. These are the diuretics we resort to in dropsy, when the vascular tension is low. They are diuretics by virtue of their action upon the circulation generally, rather than by their action upon the kidneys or the renal circulation. They increase the force of the ventricular contractions, while they tighten the arterioles, by diminishing their lumen, and so they increase arterial tension; while the increase of pressure within the arteries produces more rapid exosmosis in the renal tufts and so an augmented flow of urine follows.

This is the mechanism of the improved flow of urine which follows the administration of a series of doses of digitalis in cardiac disease, as in mitral regurgitation for instance. Such are the means by which the bulk of the urine is increased in certain morbid conditions. When given to a person in health, digitalis produces but little increased flow of urine; in toxic doses there is suppression of urine.

Digitalis.—There is no notable increase in the bulk of urine solids after the exhibition of digitalis. This agent is not a diuretic in that sense at all. It is often desirable to increase the secretion of solids while at the same time it is necessary to act upon the circulation; then digitalis may be given with some of the second division of diuretics. Consequently we can combine these agents, and the following is a very agreeable mixture:

Diuretic Mixture.—Spirit of chloroform, 20 minims; tincture of digitalis, 10 minims, infusion of buchu, 1 ounce. The addition of potash, in the form of the citrate, makes it a complete diuretic, combining the various forms of diuretics; especially when followed by a good drink of water.

Such combination is indicated in suppressed gout, with a feeble circulation. By such a combination we get an improvement in the circulation at the same time that we stimulate the functional activity of the kid-

neys. Without the vascular diuretic the circulation would remain languid; this agent not only increases the osmotic consequences of heightened blood-pressure but it improves the circulation generally and, as part of it, the renal circulation. The buchu acts, it is held, upon the secreting cells of the uriniferous tubules, and increases the bulk of solids; while the potash dissolves the uric acid in the body and so, as the soluble urate of potassium, the uric acid finds a ready exit in the renal fluid. Such combination of diuretics is rational in theory and successful in practice.

The second division of diuretics are those of agents which act upon the renal circulation, dilating the renal vessels and so permitting of a free flow of blood, while stimulating the secreting cells. Juniper, buchu, cubeb and turpentine are members of this group of diuretics. But as some of the constituents of digitalis exert an effect on the renal circulation, so the ordinary preparations of these drugs contain some agent which acts upon the circulation. Gin contains alcohol which stimulates the heart.

Juniper produces renal hyperemia, increased functional activity and larger volume of urine, with an augmented bulk of solids. These diuretic agents seem to have a soothing effect upon the kidney and to facilitate its working.

Buchu indeed seems to possess similar properties over the urinary tract, that bismuth has over the intestinal tract, though the action of each does not admit of an explanation. In conditions of vesical irritability its excellent effects are undisputed and indisputable. In conditions of excessive lithates and suppressed gout, all writers on therapeutics speak well of buchu. It may not be asserted positively, in the absence of direct observation, that buchu increases the solids in the urine, but the general impression produced by buchu is pretty distinct, that the cases so treated do better than when the drug is withheld. In active practice buchu is almost invariably the vehicle in which other diuretic agents are given. It certainly is agreeable to take, it is well borne and its volatile oil is readily found in the

urine, showing the probability at least of its having some local action upon the kidneys.

Potassium citrate and buchu form a pleasant mixture in lithiasis, gently acting on the kidneys after an attack of acute nephritis and washing out the blocked tubules. This, Dickinson maintains, is the correct treatment of tubular nephritis when the acute stage is over.

With potassium iodide, 5 grains, potassium bicarbonate, 5 grains, and 10 drops of wine of colchicum, an ounce of infusion of buchu (for a dose) forms an excellent remedial measure in suppressed gout, or lithiasis, especially when followed by a glass of water. Here we require a combination of diuretics suited to the patient's needs, and forming a complete contrast with what is required in heart-failure. In lithemia there is commonly a large flow of urine, pale and of low specific gravity; here we wish to increase the bulk of urine solids; in heart-failure the urine is high-colored, dense and laden with solids; here we wish to augment the bulk of urine.

Selection of Drugs.—According to the circumstances of each case do we select our diuretics. A brief consideration of the physiology of the renal secretion will tell us that digitalis is one suited to lithemia, that is, in the earlier stages before the hypertrophied heart begins to undergo fatty degeneration; and that potash and buchu are equally unsuited to relieve cardiac debility. In cases where both exist together the combination of the remedies may be indicated.

It is abundantly clear that it is not a matter of indifference what agent, classed as a diuretic, we select in our treatment of a case, nor yet what combination we choose. Certain members of this group are suited to certain necessities, and others to other needs. For successful practice it is necessary to know when to prefer squill to juniper, and broom to buchu. Unless the reader makes himself perfectly familiar with the different actions of the vascular and simple diuretics, he will often blunder in his selection of remedies and fail in giving relief to a very large and important class of cases. He may by accident hit upon a successful combination by putting several diuretic agents into one

mixture—a sort of practice which has often, no doubt, been followed by excellent results; but he will find a distinct and clear comprehension of the action of each agent a much better and surer plan, both for the patient's and for his own interests.

A diuretic which acts upon the circulation may often be added to diuretics which act upon the kidneys with good effects, and such combination is easy if what has been written above is not only read but inwardly digested. For renal ailments form a large part of the diseases and troubles of the wealthy and influential as well as of the indigent, and the lessons learned from the treatment of the one may be made very useful in the relief of the other.

There is no surer nor more deserving road to success in practice than a sound knowledge of these ailments with which the various classes of diuretics are associated; and the man who knows when a vascular diuretic is to be preferred to one of the other class has a decided advantage over the one who does not.

This subject of diuretics will be further elaborated in our next lesson.

PHYSIOTHERAPY

MASSAGE

Massage is a system of manipulations which are administered to the soft tissues of the body by the hand or hands of a specially trained operator, or by instruments constructed for this purpose. Thus we get the division of massage into manual and instrumental.

Manipulation.—The term "manipulation" includes all (mechanical) modes of treatment affecting the shape and size of a given area (squeezing, stroking, rubbing, striking, etc.). This elementary concept is contained in all varieties of manual or instrumental manipulation. It is, therefore, the elementary concept of massage. If I place my hand upon any part of the body-surface and make pressure, the area beneath the hand will yield and necessarily experience a change in its size or shape or both. If I limit the duration of this

pressure to a fraction of a second (i. e., by striking or slapping the surface) the effect will likewise be a change in the shape or size (or both) of the surface for a fraction of a second at least.

Vibration and Osteopathy.—I make this statement in order to show why vibration, which is at present such a popular physiotherapeutic method, is really a sub-variety of massage and not a method or a system *per se*. Osteopathic manipulations are likewise included under the double head of Swedish movements and massage. The efforts of osteopaths to establish osteopathy as a special method or system, differing from and larger than Swedish movements and massage combined, must necessarily be unavailing because there is nothing in osteopathy that has not been borrowed from kinesiotherapy and massage, except perhaps its visionary pathology, which is a generalization from limited premises and cannot possibly hold its own either in the laboratory or at the bedside.

The substitution of an electric vibrator for the osteopathic operator's hand has given us "vibratory stimulation" as expounded by certain enterprising manufacturers. Although having less claim to being a therapeutic specialty than osteopathy, it takes vibration out of its proper therapeutic place and makes a veritable panacea out of it, covering the entire field of clinical medicine, too often substituting assertion and assurance for proof and demonstration.

Rudimentary or Instinctive Massage.—Massage is without a doubt the oldest therapeutic method known. It seems to be bound up in the very instincts of the organism. When a man receives a sudden blow, bruise or any kind of an injury, he instinctively grasps the injured part, holds, squeezes, rubs and strokes it. This is massage in its rudimentary, instinctive form. Animals lick and rub injured parts of their bodies. We read about the "laying on of hands" for the cure of the ills of the flesh. Pain is relieved, disturbed nerves are quieted, body and soul are revived. Here we see the effects of a combination of agents of which massage is

one. Another agent contained in this combination is that ubiquitous cure-all, suggestion.

Definitions: Masseur and Masseuse.—The word "massage" is derived from the Greek verb "*massein*," which means "to rub." A man who applies massage is called a "masseur." A woman who practises massage is known as a "masseuse." The ordinary pronunciation of these French words as we hear them in every-day parlance is incorrect (massoor, massouse). The French "eu" has a sound peculiar to itself and resembling the sound of the German ö, the nearest approximation in English being heard in our word "girl." Get some person who is well versed in French to pronounce these French words for you, and try to pronounce them correctly ever after.

What are the physiological effects of massage? In a previous lesson (see June number, page 867) we have discussed some of the physiological principles involved in the therapeutic uses of mechanical methods. Some of these points enter into the subject of the physiological effects of massage, thus:

Contact.—If the operator places his finger or hand upon any part of the patient's body without pressure we get the simplest form of stimulation (see March number). Contact, according to the modern view of the subject, produces a triple physiological action. It affects the temperature of the two surfaces. This is its *thermic* effect. It stimulates the cutaneous nerves and sets up an agitation in the interneuronic dendrites. This is considered an *electrical* effect. In addition thereto there is that undefined action which is attributed to the radiation of that subtle force sometimes called "animal magnetism." What it is and what its mode of action is, has never been defined, and yet even Charcot admits its presence. This is the magnetic action of contact (*en lieu* of a better name).

Pressure.—If contact is accentuated or exaggerated, it constitutes pressure. The latter contains all the physiological action of contact plus certain definite physical effects which it is capable of producing. It com-

presses the soft parts, including the blood-vessels, and brings about a condition of relative anemia, the diminution in the amount of blood being in proportion to the degree, extent and duration of pressure. The moment pressure ceases, the circulation is regenerated. The blood rushes back with renewed vigor and in improved quality because it brings with it fresh arterial blood from the deeper vessels. Muscular and all contractile tissue is affected by pressure, which in its general action is equivalent to passive movement (see lesson in June number). The lymphatics become more active in response to the manipulation, primarily, and to the regenerated blood-supply, secondarily. The same applies to the nerves.

Variations of Pressure.—Pressure might be exerted in a direct downward direction. It might be applied obliquely. It might be of long or of short duration or even be in the nature of a blow (impact, abruptly applied pressure). It might be applied by a uniform and continuous movement (stroking or effleurage). It might be given in a variable direction in any number of ways too numerous to mention.

The Physical Effects of Massage are thermic in character, because motion and friction produce heat. Massage causes a rise in the arterial pressure, because of its directly irritating effect on the skin and on the vasomotor nerves. The necessary result of this is a condition of stimulation, not only in the area manipulated but secondarily in the contiguous territory, which may be the greater part of the system or even the entire organism. If the stimulation continues and the arterial pressure is kept at a higher than ordinary physiological level, a reaction eventually supervenes which is in the nature of a fatigue of the muscular coat of the arteries and is coincident with depression of the heart. Nature comes to the rescue and causes the cutaneous vessels to dilate while the deeper vessels are unloaded and the heart's burden is lessened. The intense effects of massage on the circulation are well illustrated by the deep impression which vigorous and prolonged massage of the abdominal contents will produce. The intra-

abdominal vascular pressure increases and causes a lessening of blood-pressure in the farthest removed regions, particularly the head and the feet. The feet grow cold and, owing to the gradually supervening intracranial anemia, the patient becomes quiet and somnolent. I have frequently succeeded in relieving insomnia by vigorous abdominal massage.

Massage (stroking) of the surface increases the heat-radiating power of the skin. This accounts for the antipyretic action of massage. In the treatment of typhoid fever the cold-rub is admittedly of cardinal virtue. It combines the antipyretic virtue of hydrotherapeutic applications and massage.

For clinical purposes massage is usually classified in the following manner:

Effleurage includes all forms and varieties of massage consisting of pressure evenly and uniformly applied and continued along a certain path. The operator may use one or more fingers, the palm of the hand or a roller instrument. If the effect is to culminate in or near the skin, no lubricant is used. If the effect is to reach the deeper structures, a suitable lubricant is applied to the skin. That effleurage is usually applied in a centripetal direction (opposite to the direction of the arterial circulation) is easily understood.

Petrissage is the kneading of a part between the fingers or hands of the masseur or between the hand of the operator and some hard structure (bone) of the patient's body. In administering petrissage the hand of the operator or the instrument used does not glide over the skin of the patient but remains in firm contact with the patient's skin and carries the latter along.

Tapotement is percussion of the patient's tissues by slapping, pounding or beating. The hand of the operator, a suitable instrument, a towel (wet or dry), etc., may be employed. *Vibration* is to all intents and purposes a subvariety of tapotement because it consists in the administration of rapidly repeated blows of greater or lesser severity.

The Contraindications to Massage are sufficiently clear and plain. Massage should not be given over sore, irritated, inflamed

or broken skin, over atheromatous blood-vessels, in cancer or abscess, on account of the possibility of stimulating absorption and encouraging metastasis, in painful and inflammatory conditions of the deep tissue, in pregnancy, in fact wherever and whenever the benefits of massage would be more than counterbalanced by the local or systemic damage done.

After studying and thoroughly understanding the theory of massage it is proper to acquire the manual dexterity which is necessary in the employment of massage as a therapeutic agent. Practice alone makes perfect. It should be begun after seeing a good masseur at work and demonstrating the various modes of application. Masseurs are scarce, bunglers and pretenders are as numerous as flies in a honey jar. I say this by way of warning. Out of all the hundreds of masseurs and masseuses that have come to me with pretentious records I have not found more than two that were good, scientific operators. Massage is an art as well as a science. Like many other recent therapeutic methods, it has fallen into the hands of the charlatan who exploits it for the purpose of bleeding his victims. This is to be regretted because of the damage done to a legitimate and valuable therapeutic method.

Gynecological Massage.—There is one form of massage which is particularly worthy of careful study and application in suitable cases. It is the form of massage elaborated and introduced by Thure Brandt, a Swede, for the treatment of certain gynecological conditions. It is used to strengthen the muscular supports of uterus, bladder and rectum in cases of uterine displacements, prolapsus, cystocele and rectocele, to break up adhesions, to encourage the absorption of exudates. The part to be treated is fixed by the index and middle fingers of the left hand introduced into the vagina, the right hand manipulating the part through the abdominal wall. The contraindications, according to Brandt, are pus and cancer. The objections to Brandt's gynecological massage come principally from operating surgeons whose panacea is the knife—or from others who

have given this form of massage without any benefit. The fault usually lies with the men who do not know enough about gynecological massage and condemn it after making a few bungling attempts to use it. Theoretical knowledge is not sufficient. Technical education of the fingers and hands is indispensable.

BEST SITE FOR A HYPODERMIC INJECTION

On the extensor aspects of the arms and legs, as there are fewer veins, so less danger of puncturing one in this location; also fewer cutaneous nerves, so less painful; and finally the tissues are more relaxed; one may inject over the abdomen or in back under some circumstances.

I had an interesting case of morphine habitué, male, who complained of pain about the umbilicus, when I was cutting down his "dose," and he begged me to inject the morphine over the place where the pain was instead of in his arm. I thought it just a whim, but to humor him injected it near the umbilicus. I found that I could take the "dope" away more rapidly, and that a smaller dose gave greater relief when injected here than a larger one thrown into the arm. I was inclined to think this was a purely psychic effect, but now from a little experimentation really believe that "habitués" find more relief from smaller doses when injected over the site of pain. I would not wish this to go on record as yet, for I have not a sufficient number of cases upon which to base a conclusion.

JAS. R. BLOSS.

Huntington, W. Va.

[An interesting observation. Have others observed this result?—ED.]

ABUSE OF HOT WATER

I trust that I may be excused for dwelling upon the use of water as a therapeutic measure. In using water as a remedy, either as a drink, injection or as a bath, it is necessary that we take into consideration

its temperature. I shall not dispute that hot water is soothing, but we know also that when continued without interruption for any great length of time it debilitates, and this is true whether used internally or externally. I believe that atonic dyspepsia can be induced by the continuous use of hot water at meal-time. At a hotel in an Arkansas resort it was remarkable the number of persons who could be heard calling for hot water at meal-time, at every meal. I believe a cup of hot water after meals would prove beneficial, but I object to its continuous use during the meals as some people use it.

I have often suggested a cup of hot water after meals; it meets the indication that some dyspeptics claim for soda mint, bicarbonate of sodium and other so-called quick reliefs for dyspepsia. I know those who have the pernicious habit of running for hot water every time they have a pain in the stomach, however slight. I always warn people against taking warm water on an empty stomach. It should be borne in mind that hot water should be taken as a remedy and not as a "habit."

The same is not true of cold water, but upon the other hand, the habitual use of cold water is a good habit to form. Cold water is a tonic to the stomach and is good taken on an empty one.

J. S. LINDLEY.

Darlington, Okla.

[On the other hand, we do not believe that Dr. Lindley would recommend indiscriminate gulping of ice-water and iced drinks. This is peculiarly pernicious during the hot months. The iced water prevents quick vascular reaction, chills the stomach-walls, checks secretion already enfeebled by the temperature and drawing of the blood to the surface. What say our readers?—ED.]

AUTOINTOXICATION

In this connection the following report by Dr. E. M. Stewart, of Imperial, Nebraska, is of interest: "Thursday morning early after answering question No. 5, Wednesday evening, I was called eight miles to see a

two-and-a-half-year-old girl. Temperature was so high and pulse so rapid I saw no use in taking them. Head thrown back; eyes wide open; face cyanotic; whole body brought into play in effort to breathe. The parents said she was taken with severe pains in the chest Tuesday morning; later there was fever, cough, vomiting, rusty sputum, continuing worse until midnight. Wednesday night they thought she would choke. They used poultices which relieved some, but the patient relapsed and they called me.

"I saw in this case an extreme test for active-principle therapy. I gave 1-3 grain calomel every one-half hour for three doses, followed by a saline laxative solution, sweetened so as to be drank instead of water. I placed in one glass three granules each of aconitine, 1-134 grain, veratrine, 1-134 grain, and one of carmine, with twenty-four teaspoonfuls of water; in another glass of twenty-four teaspoonfuls of water, twenty-four tablets 1-3-grain calx iodata. I placed under each arm and over the chest two plasters of thermogene covered with two hot poultices of onions and chopped feed (all we had), covered the chest well, the child taking no notice of what we had done.

"I gave teaspoonful doses of the red alkaloidal medicine every fifteen minutes. In two hours the patient was perspiring freely and breathing easier. I left, directing that the 'red' medicine be administered every half hour and the 'brown' every two hours, changing the poultice at noon.

"At 3 p. m. they telephoned me that the child's bowels had acted freely, she was breathing quite easily, and that the next older girl (4 years old) had been taken the same way. I ordered the 'red medicine' given to the older one until I could come. That evening I changed plaster and poultices, both, to youngest, directed 'red medicine' given every two hours and brown every half hour, with more calomel and saline laxative.

"The older girl was developing every symptom of pneumonia. I gave her the same medicinal treatment as the other (no

poultices or plaster). Saturday morning the youngest had slept all night, noticing strangers for the first time when I approached; harsh but easy breathing, skin moist, bowels active; wanted something to eat. The older one was up and around, but moist râles over both lungs. Sunday both better and today—Monday—doing fine!

COMMENTS ON THE LESSON

The postgraduate course continues to make friends. We should like to print all the kindly things which are said about it, but the sample which follows is sufficient for this month. Says Dr. James McMillen, Tyrone, Okla.: "I want to be progressive, and your course is an evolution with me. I am receiving greater benefit than at any other course I have ever attended in person. Throw on the searchlight and we can see our errors. I am eager for each new copy."

The Effects of Chronic Constipation.—We cannot answer this better than in the words of Dr. Wm. C. Post of Maquoketa, Iowa. He gives them as follows: (a) Regarding the bodily health and (b) with regard to psychic effects:

"In chronic constipation the accumulation of large quantities of hardened feces in the rectal pouch may produce serious disturbance by mechanical pressure; in males by pressure upon the prostate and consequent urination, and by pressure upon the bladder with cystic irritability; in females by driving the uterus over upon the bladder and producing uterine congestion and, following this, consequent uterine hypertrophy. Also the pressure of the enlarged, heavy uterus on the bladder and urethra prevents the bladder from holding any great amount of urine and thereby necessitates frequent emptying of the same. This over-exercise stimulates hypertrophy of the bladder-structure and brings on a condition of irritability both of bladder and urethra. Then there is the stasis and consequent chronic inflammation set up in the rectal mucous membrane and underlying connective tissue, which tends to induce the formation of hemorrhoids and the troubles attendant upon them; also, by con-

tinual stimulation by pressure, and its concomitant counter-resistance by the sphincters, we get hypertrophy of the same and sometimes over-development to an almost cartilaginous condition with sphincteric spasm and the unhappy condition of the nervous system which follows. Sometimes when the excitability of the sphincter is exhausted we get increased relaxation followed by rectal prolapse. Then there is the toxemia caused by the absorption of poisons from the retained mass and (a) the consequent deleterious action upon the system at large.

"(b) Partly from the continued irritation of the nerves of the rectal region and the disturbed condition which their irritability reflects upon the nervous system at large, but mainly from the toxemia caused by absorbable poisons, constipated people are generally very low-spirited, and it sometimes happens that insanity develops from this cause. The removal of the cause may relieve this condition, but habit-psychoses often persist after removal of cause."

It will be remembered that chronic constipation does not always cause any bad symptoms. Dr. M. Jay, Hygiene, Colo., says: "I knew a man who all his life had a passage from the bowels only once a week, and quite often would go two weeks, yet he seemed to suffer no inconvenience, mentally or physically."

The Use of Enemas.—This is nicely answered by Dr. S. P. Tracy, Walkerton, Ind., as follows: "When we in any way relieve any muscle or organ of the body from their normal work or action we lessen ability of the part relieved to perform its function. The more and oftener we do this the harder to bring about a normal 'functioning.'"

Purgative Action of Glycerin.—According to Dr. J. Juen, Ossian, Iowa, the purgative action of glycerin depends upon the fact that it is "an irritant to the intestinal tract, abstracting water from the tissues and stimulating peristalsis." He seems to cover the ground in a very few words.

Composition of Mineral Waters.—The formulas of these waters are given in most textbooks, but for practical purposes

it is sufficient to remember that Kissingen is an acid saline water with a preponderance of sodium chloride. Vichy is an alkaline water with preponderance of sodium and potassium chloride. Karlsbad is an alkaline saline purgative containing much sodium sulphate and sodium bicarbonate, and Hunyadi Janos consists largely of purgative sulphates of sodium and magnesium and considerable sodium chloride.

Compound Licorice Powder.—According to Dr. R. H. Gary this contains:

180 Gm. senna. This is an active cathartic, causing griping and flatulence, acting on nearly the whole of the intestinal tracts.

236 Gm. glycyrrhiza. Demulcent and laxative.

4 Gm. oil of fennel. Antiseptic, stimulant and carminative.

80 Gm. washed sulphur. Mild laxative, antiseptic, germicide.

500 Gm. sugar. Palatability.

Why is Salt Added to Enemas? Dr. Post answers this nicely as follows: "Because its addition promotes osmosis and stimulates peristalsis and (what is more important) hinders absorption. The text gives one part to sixteen, but it can be used somewhat stronger, and in my hands is more efficacious when innervation is defective, if the solution is cold."

Mechanism of Purgation.—We cannot do better than to quote Dr. Post again. He says: "When a substance locally irritates the intestinal mucous membrane the intestines respond by increased peristalsis, which hurries the fluid contents of the small intestine through the large bowel so rapidly that absorption does not take place and the feces are evacuated in a fluid form. There is no doubt that increased peristalsis may be caused by action on the nervous mechanism of the intestines (witness the diarrhea sometimes set up by pushing the administration of strychnine for other purposes) but until we understand this action better, we must be content to believe that, in the main, the action of purgatives is due chiefly to their local influence."

When Saline Cathartics and Active Vegetable Cathartics are Contrain-

dicated.—Again we quote Dr. Post: "When there is any possibility of mechanical obstruction, except from impacted feces (and even then I would exhaust every other means first), I would not give either. Neither would I give either one in case of colonic spasm (spastic constipation). Nor would I give either in cases in which I suspected either intestinal or parietal peritonitis was impending or present. And I certainly would not try to correct the constipation habit by either form of cathartics. Neither would I administer either in cases of mucous enteritis where either the mucous or submucous tissues were actively inflamed. I would not give the active vegetable cathartics in either typhoid fever or pregnancy, and would not give salines in active cathartic doses when the blood-pressure was low."

How Does Atropine Act as a Laxative?—Apologies for quoting Dr. Post again, but his paper is so excellent and his answers so much to the point that we let him speak again. He says: "It doesn't! By means of overcoming a spastic condition of the intestinal musculature it *permits* the bowels to move, if motor innervation is sufficient, and if not, it (by neutralizing opposing force) permits other remedies, laxative in their nature, to produce results."

Symptoms Following Active Catharsis.—The chilliness, sense of prostration and even collapse following active catharsis is explained by Dr. I. N. Brainerd, Alma, Mich., as follows: "This shock to the nervous system is due to a rapid abstraction of heat from the body with the evacuated fluids, and, if the purging be due to bacterial infection, to bacterial toxemia. The pain incident to the purging will sometimes add to the shock."

We might also add, as others have, that the shock is partially due to the withdrawing of the blood from the surface of the body, the splanchnic blood-vessels meanwhile being overfilled. In other words, disturbed circulatory equilibrium.

Some Useful Medicated Clysters.—A number of useful preparations of this kind are described by our students. Among them are normal salt solutions, 0.6 percent. Dr.

H. G. Palmer says that this should be used where there is great weakness or shock and in such cases should be given as warm as possible every hour or two. Many use oil of turpentine, 1-2 to 1 ounce in two quarts of soap solution. Some add sodium chloride to this. In diarrhea or cholera infantum and typhoid fever many suggest the use of the sulphocarbolates in solution.

Dr. J. A. Juen, Ossian, Iowa, recommends two or three ounces of glycerin to a pint of water. For impacted feces Dr. Post recommends kerosene emulsion with soap. He says he has never used pure kerosene but would do so if he failed with the emulsion. He has used cold saturated salt-solution where scybala are found high up in the sigmoid or at the splenic flexure. He says he has succeeded in dislodging scybala containing blackberry seeds, with a history of no berries having been eaten for years. Turpentine is recommended to be given with soap-suds and also with egg-white emulsion. Infusion of ox-gall in watery solution of bicarbonate of soda is also recommended in cases where the colon is packed with hardened feces, and also an aqueous solution of oil of cinnamon as a routine measure in typhoid fever. Aqueous starch solution combined with antiseptics and opiates is often used in dysentery, and capsicum, an aqueous infusion, in acute hysteria.

Enemas of mucilaginous substances are used as emulsions. Dr. R. H. Gary, Murfreesboro, N. C., recommends apple-cider vinegar for fecal impaction, a half a pint introduced through the colon-tube. He says that this will bring away almost any impaction in a short time.

The X-Ray and Peristalsis.—Experiments as concerning the movements of the stomach and intestines have shown that when bismuth subnitrate is taken internally an outline of the intestinal walls can be seen with the x-ray. These movements have been studied by various observers but principally by Cannon of Boston to whose published work reference must be made. By observing the different portions of the digestive tract he was able to see the oscillating movement of the stomach and the peristaltic

movement of the intestines, annular, wave-like and longitudinal. The student is referred to the larger textbooks.

Hemorrhoids and Constipation.—This question is answered in a nut-shell by Dr. J. C. Wakefield, Vinco, Pa. He says: "Constipation causes hemorrhoids by causing more or less obstruction to the return flow of blood from the anal region. The resulting congestion has a great influence in causing hemorrhoids. Existing hemorrhoids may set up subacute or chronic inflammation in the rectum, which causes impaired innervation of the rectum. This impaired innervation results in obstinate constipation."

High-Tube Injections.—We find a great difference of opinion on the use and value of the high-tube injection. The majority of those answering this question find that for all ordinary purposes the rectal enema is sufficient, but also nearly all admit that there are conditions in which the high-tube injections are of value, the difficulty, however, being in the introducing of the tube. This can be managed very nicely if, when the tube is first introduced, water is allowed to flow so as to balloon-out the bowel ahead of the point. The high-tube is recommended by nearly all when there is impaction high up in the colon. Dr. Zimmerman says that he uses this in children as well as adults with entire satisfaction.

Value of Dilation of the Anal Sphincter.—An excellent answer to this question is as follows: "Forcible dilation of the muscle proves beneficial in two ways: in the first place, as a result of the relaxation of the muscle, immediate rest is obtained and all spasmodic sphincteric contraction ceases; in the second place, the oversensitiveness disappears, supposedly as a result of stretching the terminal nerve-filament, and thus less resistance is offered to the passage of the feces, which, consequently, do not tear and contuse the parts as before. My experience has been that this procedure is practically a prerequisite to effectual treatment and cure of fissure of the anus, and that not only is it a prerequisite to the successful surgical cure of hemorrhoids, but that, in a great

many cases, *the devulsion itself*, without any subsequent operation, will result in a practical cure of the piles."

QUESTION BOX

Antiseptics in Eyes of New-Born Infants.—S. P. T., of Indiana, wishes to be shown the necessity of wiping the eyes of an infant immediately after birth. The normal vaginal secretions are sterile. Furthermore, "the eyes being tightly closed while *in utero* would prevent the amniotic fluid from entering, and if the eyelids were not closed and the amniotic fluid were germ-bearing, would not the eyes show the effects of infection at birth? It seems to me we are interfering by trying to render aseptic a noninfected area."

The custom of instilling antiseptics into the eyes of the newborn has come into existence on account of the enormous percentage of cases in which the vaginal secretions of the mother contain the gonococcus, and the disastrous effects produced by this germ upon the eyes of the baby. It is said that fully 80 percent of blindness is due to this cause. This danger is peculiarly great in city practice—and our textbooks are written by city men. The nitrate of silver solution usually employed does no harm, and it is much easier to prevent ophthalmia by its early use than to cure it when it has developed. The infection comes from the vagina, not from the uterus. The fact that the eyes of the little one are closed makes little difference, for they may be infected, not only during the passage of the head into the world, but after birth, during the baby's first toilet. The strength of the solution of silver nitrate advised is 2 percent. Last month some one, through mistake, placed it at 10 percent.

What is Sajous' Theory?—The question is asked by R. W. H., Canada: It is difficult to condense the answer into a few words. Dr. Sajous believes that the metabolic processes of the body are controlled by the secretions of certain internal glands; to be more specific, by what he calls "the adrenal system." Disturbance of balance in

these glands causes disease. Remedies used for the cure of disease act through their influence upon these glands.

Three glands make up the "adrenal system," the adrenal, the thyroid and the pituitary (anterior and posterior). These glands are intimately connected with each other through the sympathetic nervous system and the circulation. The pituitary is in a way the governing body through its intimate connection with the nervous system. The thyroid, through its secretion, controls the action of the pituitary, and through it, to a greater or less degree, the entire adrenal system. The adrenal is the great secreting gland, most vitally concerned in all metabolic processes. It secretes an "oxidizing substance" which Sajous calls "adrenoxin." This has to do more or less with all the nutritive processes.

Practically all remedies influence the body through their action upon the adrenal system, and the methods in which they act are carefully studied by Sajous, who has dug out of this study a lucid explanation of the real action of remedies. The other internal glands, such as the pancreas, spleen, etc., are closely allied to the adrenal system and to a large degree depend upon it. Immunity, as described by Metchnikoff, Ehrlich and others, is made to fit into Sajous' theory in a most remarkable way.

For a further description of this theory see A. Vogeler's article in the March number (1908) of CLINICAL MEDICINE, or better still, purchase the magnificent two-volume book of Sajous, "The Internal Secretions and the Principles of Medicine," published by F. A. Davis & Co., and costing ten dollars.

Intestinal Gas-Formation.—J. H. V., of Ohio, asks "What is the best method to relieve, both temporarily and permanently, the formation of large quantities of gas in the large intestine, especially as seen following the more acute stages of dysentery?" This does not properly belong in this department, but as it was submitted to the "question box," and we have been discussing intestinal remedies here, we are answering briefly.

There are several factors in gas formation: (1) Fermentation of gas-forming food. (2)

Deficiency in the gastric or intestinal secretions, the cause of which may be organic or functional. (3) Impairment of the activity of the intestinal muscles, usually due to deficient nerve-tone.

These give the indications for treatment: The first thing to be done therefore is to withdraw as far as possible all gas-forming foods from the dietary, including sweets, starches and vegetable acids, the former because they readily undergo fermentative changes; the second because the vegetable acids unite with the carbonates in the intestinal canal and produce CO_2 and other gases. Fecal residues should be removed by saline cathartics and enemas. To check fermentation we may give intestinal antiseptics, or if indigestion is present, hydrochloric acid or other aids to digestion. Carminatives aid in the expulsion of gas and are also antiseptic. Turpentine is useful in tympanites. When there is feebleness of the muscles physostigmine is the remedy. In cases of dysentery the indications are to withhold all gas-forming foods, sweep the bowel clean by the use of saline cathartics and enemas, then control peristalsis by the use of atropine and possibly apomorphine. Local medication, if it can be applied.

Heatstroke.—One of our students, J. Z., of Indiana, asks the following question: "In heatstroke, would it not be more rational to apply heat to the body by sponging off the surface with hot water, as in this way evaporation is going on and perspiration is taking place and heat is being radiated, whereas if body is wrapped in flannel blanket heat is retained. Of course we would want cold applied to head."

We have submitted this to Dr. Juettner who replies as follows: "In all cases of heat- or sunstroke, it is proper to adopt measures which will facilitate the radiation of heat from the body. Applications of cold, if they are continuous, prevent radiation of heat by rendering the skin anemic and in this way depressing skin-function. Dashing cold water against the skin for the purpose of bringing on a reaction and incidental hyperemia and increased function of the skin, is manifestly proper, although not without

danger if the responsive or reactive tone of the system has been exhausted, as is not infrequently the case in heat-victims. The safest and most generally useful method is by all odds the application of heat, as the Doctor suggests. His ideas coincide perfectly with the teaching contained in the lesson in which this subject was discussed."

Effect of Digital Pressure on the Perineum.—M. G. P., Tenn., says: "For a long time I have been acquainted with the fact that by pressure on the perineum with the fingers the nerves and muscles concerned in defecation can be called into immediate action. Do you know anything of it personally, and, as to the physiology or anatomy of it?"

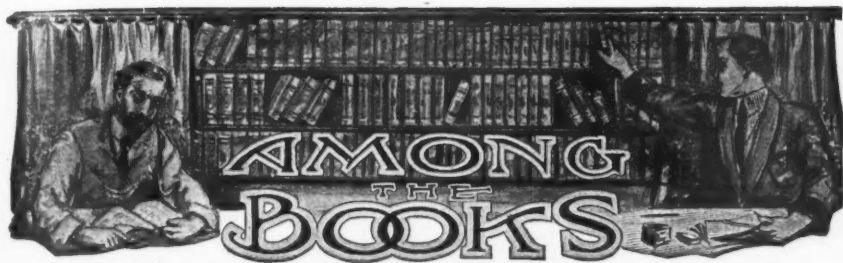
We have had no experience with this expedient. We should like to hear from others of our readers as to what they know about this simple method of stimulating the activity of the bowels.

EXAMINATION QUESTIONS

1. In what class of cases should saline purgatives be used? When are they contraindicated?
2. Describe the best forms and methods of giving saline cathartics.
3. What is the theory of the action of diuretic drugs? How does water act as a diuretic?
4. What is the relation between the skin and the kidneys?
5. How are the diuretics classified? Name examples.
6. For what conditions are diuretics employed? What conditions should determine their choice?
7. Name and describe the different modes of massage.
8. What are the physical effects of massage?
9. How may sleep be induced by mechanotherapeutic means?
10. In what direction as to the circulation is massage mostly applied? Why?
11. Name contraindications to massage. Give reasons.
12. Describe method of massage for cure of chronic constipation.

RESEARCH QUESTIONS

1. Define and describe (a) neurons, (b) dendrites, (c) interneuronic dendrites.
2. What are the glomeruli and what is their function? How are they affected in disease?
3. Give personal practice and experience with diuretic drugs and methods.
4. What effect has sweating on the urine, quantitatively and qualitatively?
5. Why are the patent "kidney cures" used so indiscriminately, harmful in many cases?



SABOTA'S "HUMAN ANATOMY"

Atlas and Textbook of Human Anatomy. by Johannes Sobota, M. D., of the University of Wuerzburg. Edited, with additions, by J. Playfair McMurich, A. M., Ph. D., of the University of Toronto; formerly of the University of Michigan. Vol. III. Vascular system, nervous system, and sense organs, with 297 illustrations, mostly in colors. Philadelphia and London: W. B. Saunders Company. 1907. Price \$6.00.

This is the last volume of this excellent and practically useful anatomy for the physician and student, though (and because) the whole work is not meant to satisfy the special anatomist, who would require more minutiae, more plates, more volumes which would only burden and confuse the plodding physician and the memorizing student.

BALLENGER'S "DISEASES OF THE NOSE, THROAT AND EAR"

Diseases of the Nose, Throat and Ear, Medical and Surgical. By William Lincoln Ballenger, M. D., of the College of Physicians and Surgeons of the University of Illinois. Octavo, 896 pages, with 467 engravings and 16 plates. Cloth, \$5.00 net. Publishers: Lea and Febiger, Philadelphia and New York. 1908.

While monographs on each of the organs treated of in this volume certainly have their place in medical education and practice, the polygraph on all these three organs in their individual and related functions, diseases and treatment comes to the plodding general practitioner as a real friendly con-

sultant and help, provided he is not a mere theorizer but himself a practitioner in the diseases he discusses. We find this volume just such a consultant, the result of much erudition and actual experience from private and clinical work. The author is, moreover, an expert teacher who from observation knows where a lack of apprehending some point in the anatomy, physiology and disease of the organ under consideration is apt to exist, and he endeavors to clear up all difficulties satisfactorily by careful explanations and unstinted illustrations. That this author and his book are up-to-date in accepting or in rejecting anything new or old in diagnosis and treatment of the organs he treats of and their relations to each other and the entire organism, need not be either emphasized or told. The book is very satisfactory every way, and is a splendid token of medical advance generally, and in this, our own, country particularly.

BURGESS' "CHRONIC DISEASE"

Chronic Disease: The Natural Method of Diagnosis and Successful Treatment. By Dr. W. H. Burgess, Author of The New Field. Avondale (Chattanooga), Tenn. 1907. Price \$1.00.

This is not a small book, for it has 309 pages. It is not an *ex cathedra* book but decidedly *extra cathedra*. It does not limit itself to the elucidation of the things named in the title, but in considering them takes the widest ranges of life to which they may be related, directly or indirectly. Dr. Burgess assumes only five diseases to exist, and to them he affirms all other ailments can be

traced, and this tracing is to him the art of medical practice. He calls this the "natural method," in contradistinction from theory, which he rates very low for good and very high for harm and mischief. His language is neither offensive nor abusive, but keen and kind, and provokes the inquiring thought, "Is he perhaps right?" The teachable mind will find many a point in this book which it will be willing to examine, and of course adopt if good, but the "know-all," conceited mind will be ready to denounce the whole book as worthless. And yet books of this kind were the ancient classic medical books, on which the science and art of medicine are historically founded, though denounced at the time of their origination.

KOLLE'S "HYDROCARBON PROSTHESIS"

Subcutaneous Hydrocarbon Prosthesis. By F. Strange Kolle, M. D. Publishers: The Grafton Press, New York. Price \$2.50.

Since Gersuni, of Vienna, first introduced subcutaneous paraffin injections for cosmetic purposes in surgery, the practice has suffered at the hands of those who have thought the technic easy to acquire. That it is a legitimate practice in the hands of those who have brains to learn and a conscience to practice may be learned from the excellent book before us.

PRACTICAL MEDICINE SERIES: GENERAL MEDICINE

The Practical Medicine Series. General Editor, Gustavus P. Head, M. D., of the Chicago Post-Graduate School. Volume I, "General Medicine." By Frank Billings, M. S., M. D., of Rush Medical College, Chicago, and J. H. Salisbury, A. M., M. D. Series of 1908. The Year Book Publishers, Chicago.

This volume costs \$1.50. The price of the whole series of ten volumes, issued about one every month, costs only \$10.00. Each volume may be purchased separately.

We have often spoken in laudatory terms of this series, and of its eminent usefulness

for the studious and faithful physician who seeks to discharge his duties with an approving conscience. We cannot do this without informing ourselves of what is being done in medicine the world over. To help us to do this, within reasonable time and with deserved reliance upon the source whence we derive our information, this series has served for a number of years past with laudable zeal and efficiency.

The volume before us tells us what was done in the year 1907 in diseases of the respiratory organs, circulatory organs, blood-vessels, blood-making organs, infections, ductless glands, metabolism, and diseases of the kidney.

"LABORATORY OF BACTERIOLOGY"

A Laboratory Handbook of Bacteriology. Translated from the tenth German edition. By M. H. Gordon, M. A., M. D., with additions. Oxford University Press, London and New York. 1907. Price \$1.50.

This is not a book for the beginner, but for one who is familiar with the subject and who desires to be thoroughly up-to-date. For the American bacteriologist this book has the advantage of giving the experience of workers in Europe and England.

SHEDD'S "CLINIC REPERTORY"

The Clinic Repertory. By P. W. Shedd, M. D., New York. Including a Repertory of Time Modalities, by Dr. Ide of Stettin, Germany. Translated from the Berliner Zeitschrift Homeopathischer Aerzte, Band xxv., Hefte 3 and 4. Philadelphia: Boericke & Tafel. 1908. Price \$1.50.

This book is essentially for homeopaths, but the educated physician who is not dried up in the forms in which his school has bundled him up but keeps green and fresh and growing (and we fondly trust many such are among our readers) will find many interesting points in this book. There is always room for learning, though there may not be for accepting.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5330.—“Leucorrhea.” G. H. B., Mississippi, asks advice in a case of leucorrhea, due he thinks to congestive endometritis. About one year ago when the woman was pregnant she was troubled quite badly with the leucorrhea, and after the baby was born the lochia continued for about six weeks or two months and at times were streaked with blood and had an offensive odor. The doctor put her on calomel and podophyllin, followed by saline laxative and high rectal enemas of glycerin and hot water every night for a week, cureted the uterus and irrigated with a solution of creolin and every other day for a week applied ichthyol and glycerin tampons; also had her on iron, quinine and strychnine every four hours. After a week of this treatment she seemed to improve, but lately has been as bad as ever. She has no pain, has good appetite, rests well at night and holds her weight about the same; if anything, has gained a pound or two. For a week after the baby was born she had fever and probably a slight infection, but with appropriate treatment she got along nicely. The baby only lived thirty-six hours after delivery; died with convulsions. Temperature 104°F. Date of birth Dec. 10, 1907.

It is impossible for us to give intelligent advice without a much clearer idea of local conditions. There may be an involvement of the cervical mucosa only. If the discharge is thick and ropy it is probable that the cervical canal is implicated, and we certainly would not curet unless it is absolutely essential. Use a proper glycerin

suppository, inserting one every other night after a very hot douche, using Ruchstall's or some similar device which enables the patient to retain the water, dilating the vaginal canal meanwhile. A solution of a suitable vaginal antiseptic powder, one dram to two quarts, is the best thing to use. A uterine tonic will unquestionably prove efficacious. Keep the bowels open with salines, and improve the systemic tone at the same time by exhibition of the arsenates of iron, quinine and strychnine. It might be well to take a probe or applicator wrapped with cotton saturated with ichthyol and apply to the cervical mucosa once or twice weekly, after first cleansing the external os and cul de sac with an antiseptic douche. There may be a laceration of the cervix. Make a careful examination; blood streaks might even indicate a malignant condition.

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QUERY 5331.—“Imperfect Development of Child.” L. C. H., Missouri, has a son five years old who is healthy, active, a “good feeder,” strong, but very small for his age; looks as if he were two years old. He desires to know whether lecithin would influence growth any. Not having had any experience with it he asks our advice.

The child would probably benefit from the exhibition of one-half tablet between meals, and the arsenates of iron, quinine and strychnine, with nuclein, after meals. It is altogether probable also that calcium lactophosphate, one or two tablets three times a day, would be of real service in this case. Some of these children showing delayed develop-

ment do well under thyroid. Give him a highly nutritious but easily assimilated diet. Insist on deep breathing, daily sponge-bath, plenty of open-air exercise, and see to it that there is no phimosis or constipation. Keep an eye on the child's habits.

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QUERY 5332.—“Diet in Uricacidemia.” J. E. P., New Jersey, writes: “In your instructions regarding the treatment of the uric-acid diathesis you mention the avoidance of ‘young germinating plants.’ Just what do you mean by this? All plants are germinating either from the seed or the fruit.”

“Young germinating plants” means peas, beans and other vegetables in the seed-forming stage. These plants are very rich in nuclein, which may be a source of uric acid within the body. Personally we do not insist upon this restriction to any great extent but warn patients not to eat such things to excess. Fortunately at the time of year when these things are obtainable there is also a plentiful supply of spinach, lettuce and other “greens” and vegetables as well as the fruits.

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QUERY 5333.—“Diabetes Mellitus.” W. F. R., Nova Scotia, has a patient (girl, aged 14) voiding urine with a specific gravity of 1040, with much sugar. She complains of being tired and her legs ache. She has been under treatment for four weeks, on a strict antidiabetic diet, with codeine, gr. 1-4, thrice daily. The doctor has kept the bowels open and clean with saline cathartics. While at first she was passing large quantities of urine and was thirsty all the time, with frequent voiding of urine through the night, she now passes only about two quarts, does not waken at night, and appetite is moderate. She looks pale and has lost about five pounds in weight in four weeks, on a diet of no carbohydrates. She still has a quantity of sugar in the urine, and the latter has a specific gravity of 1035 to 1040. Has no other symptoms of diabetes. The doctor asks for “the best treatment” and how we should handle her case.

The prognosis is not good. When the disease occurs in a patient as young as this one

the outlook is decidedly unfavorable. As a rule the younger the patient the more grave the prognosis, this of course within a reasonable limit. The fact that the patient is losing weight is an unfavorable sign. Apart from this, however, we congratulate the doctor upon the success he has had in treatment. The fact that he has been able to diminish the quantity of urine, reduce the thirst and presumably somewhat diminish the amount of sugar, is encouraging. Let us hope that this is one of the few cases of advanced diabetes in the young which will prove amenable to treatment.

We shall not undertake to outline the diet carefully, as lists are given in all textbooks. We want, however, to give you this warning, and that is, that in the endeavor to eliminate entirely the carbohydrates from the food we run the danger of bringing about a condition of acetonuria or acidosis. This, if overlooked, may terminate in diabetic coma. While you are dieting this patient very carefully frequent examinations of the urine should be made not only to determine the amount of sugar but also the presence of acetone and oxybutyric acid. If these should appear, place your patient at once upon large doses of sodium bicarbonate which may be given both by the mouth and by the rectum. Better than to attempt to remove all the carbohydrates from the food is to give a carefully measured quantity daily, reducing this from day to day until you reach the point of tolerance as shown by the fact that the amount of sugar in the urine is no longer reduced. This requires a good deal of care but it is worth it.

Now, in regard to medicinal treatment: The first thing is to attend to the alimentary canal. These patients have a tendency to become constipated and frequently the stools are acholic. Repeated doses of calomel, podophyllin and leptandrin and a daily morning dose of saline laxative are very valuable. Not only does this prevent absorption of poisons from the bowel, which adds to the intensity of the disease, but if there are a number of watery stools daily the tension upon the kidneys is reduced. The sulphocarbolates are always valuable in these cases.

Digestion may be aided by the use of papayotin or pancreatin or both. Sometimes the addition of a small amount of hydrochloric acid after meals is indicated by feeble digestion. Arsenic given to full physiological effect in my opinion is the most valuable single remedy in diabetes; this is especially true where there is increasing anemia as seems to be the case with your patient. The arsenates with nuclein are valuable in these cases, also arsenic bromide, giving the latter possibly in connection with the former to full arsenic effect as shown by slight puffiness of the lids, then keeping the dosage slightly below this point.

Codeine is of course a valuable preparation and may be indispensable in your case. It should be remembered, however, that there is a codeine habit and if there is hope for recovery care should be taken in its administration. Read the chapter on Diabetes in Candler's "Everyday Diseases of Children."

QUERY 5334.—"Pediculosis Pubis." H. A. S., Minnesota, sends a specimen of pubic hair from a patient who is suffering intense pruritus, stating he can not find any parasites, but notes ova on the hair.

The report of our pathologist shows the hair to bear the ova of *pediculus pubis* (the crab-louse). The doctor can easily destroy the louse with coal oil or a solution of mercury bichloride, though the best and safest plan is to shave the parts clean. A strong infusion of tobacco or ether sprayed over it, may also be used if the patient does not desire to be shaved. Apply a lotion of bichloride of mercury, using four grains to the ounce, and be sure that the solution reaches every portion of the skin. This will destroy the pediculi, and the ova may be removed from their attachment to the hair by sponging with coal oil. Look out for the axillæ and hair on breast. Be sure too that the perineal hair gets medicated or you will have a relapse.

QUERY 5335.—"Urethral Caruncle."—C. L. B., Indiana, has a patient, female, sixty-five years old, who has what appears to

be a small prolapse of the mucous membrane of the urethra at the orifice or the meatus. It is red and angry like a caruncle. It is very irritable and distresses her when she urinates and aches at other times. She is unwilling to submit to removal with knife or cautery. The writer asks: "Is there any local or constitutional treatment that would likely give relief? Analysis of urine shows it to be normal. I should be pleased to hear from you through the query columns of THE AMERICAN JOURNAL OF CLINICAL MEDICINE or direct."

You may with advantage apply orthoform to the parts, either as a powder or in the form of an ointment. Bathe thoroughly with a preparation of calendula (Lowry's calenduline is a very good preparation) one part, extract of hamamelis one part, and then apply the orthoform, but take our advice and, under local anesthesia, excise the entire growth. It is probably a caruncle, though in women of this age, with relaxed parts, prolapse of the urethral mucosa is not so very uncommon. If it is a caruncle, assure her that she will not suffer while having the growth removed. Cocainize thoroughly and snip away with a pair of curved scissors. Stop oozing by pressure and dress with a strip of oiled anti-epit gauze. The operation for prolapse is a simple one.

QUERY 5336.—"Food in Puerperium." J. L. L., Oklahoma, asks: "What articles of food or class of food would you forbid a puerperal woman to eat. We have a great many 'know-alls' here among the females who tell the puerperal women if they eat fish, chicken, turnips, greens or drink sweet milk they will surely die, because Mrs. A. or Mrs. B. ate such and such a thing and it 'killed her dead.' Let us hear from the editor on this subject."

A light, nourishing diet is desirable during the puerperum. Heating, indigestible or very starchy foods are not desirable as a rule. Sweet milk is a most desirable food and may be given freely, but during the first few days light gruel, clear broths, custard, rice pudding, stewed fruit, whole-wheat bread or shredded

wheat biscuit, etc., are the best articles of food, fish and chicken coming later.

We should not suggest turnip and milk together, and a mixture of "turnip greens" and "sweet milk" would be very likely to cause trouble, even in the nonpuerperal state. We cannot say of course whether Mrs. A's. or Mrs. B's. death was due to the food they ate but we have no doubt that more than one woman has died from overeating a day or two subsequent to childbirth. Keep these women's bowels active and if digestion is poor exhibit papayotin after food.

QUERY 5337.—"Gas-Burns of Miners." L. D. C., Oklahoma, wants "the most approved treatment for gas-burns in the mines" as he can find no literature on this subject. "This," he writes, "is asking a great deal of busy men like you, but you have *always* been the busy doctor's friend. I read the old CLINIC in my father's office for twelve years and can't be without it. Tell me how one can tell when they are 'gas-burned' internally."

In "gas-burns" received in the mines it appears to us the conditions would be similar to those met with elsewhere with the probability of many superficial lesions (burns of the *first* degree). Exposed skin areas would meet a blast of flame and be swollen, red and tender; some vesication might follow. Such lesions would yield to the ordinary treatment—application of a protective dressing, emollient in character. Ice, remember, rapidly alleviates the pain. Apply some good antiseptic ointment freely and cover with lint or gauze. Carron oil, picric-acid dressings, etc., you are familiar with. Always open blisters, however small, and, after expressing serum, treat as above. Where the skin is *destroyed*, a prompt pencilling with pure carbolic acid gives instant relief; carbolized wet compresses or oily dressing later. In mines the burns may be soiled and you will often have to cleanse the skin from soot and dirt. Don't be *too* active, but remove what you can with cream or oil; do not apply soap or water at first. Most of the soot will come away on the first dressing

and over-cleanliness in this direction often means suffering to patient and delay in healing. If you use carron oil, *soak* your dressing and remember that an ointment is usually the best thing to use. A good formula, is boric acid, one dram, to vaseline one ounce.

Second degree burns, may be dressed with thymol iodide in oily solution. Orthoform is the best local anesthetic; dust on before applying ointment or incorporate in the latter. A 4-percent solution of aluminum acetate makes a good solution; apply on gauze, frequently repeating to keep the dressing moist. Picric acid stains and it usually gives pain, despite assertions to the contrary. If it is a hard matter to keep dressings moist, cover with rubber or oiled silk.

In minor lesions try the dry method; touch with carbolic acid and after a few moments dust with nosophen or dolomolichthyol. Give all patients a brisk aperient and the three arsenates for a few days. *Shock* will be met in the usual manner; with glonoin, strychnine and atropine in your pocket, you need not fear shock.

Third degree burns call for hypodermic anesthesia and the application of wet antiseptic dressings. A few doses of strychnine and glonoin are useful in shock. The anesthetic may follow and soon the patient will permit handling and be at ease, so the proper care may be given to extensive lesions. Do not change dressings too often, but keep them moist—using any good mild antiseptic solution. The aluminum acetate mentioned is excellent. Avoid roughness, soaking off adherent dressings. Sloughs must be removed and if pus appears, cleanse with H_2O_2 , a warm boric-acid stream and redress twice daily. For general technic and method of grafting you are referred to the works on Surgery. An oxygen apparatus (portable) is a desideratum as asphyxia is often a feature in mine accidents. Dr. Booth of Ash-tabula has a small portable oxygen generator which does the work.

Burns about the eye-lids may be dressed with vaseline carrying eight grains of salol and three of cocaine to the ounce. Clip any blebs first. Evidences of inhalation of flame are apparent: give mild alkaline or mucilag-

inous drinks (barley water is excellent) and meet symptoms.

QUERY 5338.—“Retained Placenta.” J. M. C., Kentucky, was last fall called to a woman, mother of nine children, who had been confined six months before. She had a temperature of 105°F, five to seven chills daily; could smell her out on the front porch, blood and pus flowing from the vagina. “Examination disclosed a large uterus, torn open up to or beyond the internal os, cold, clammy sweat, patient slightly delirious. The uterus was cureted and what looked like several pieces of placenta removed; urine showed lots of albumin. The patient made a slow recovery, and since has had several abscesses form, opening and draining through the uterus; at the present time there is another forming. The husband has brought suit against the attending physician, and now I am called upon to tell the story

“What shall I do? Her husband and others saw what I removed, and furthermore, the lady present at the time of confinement said to this doctor, ‘Have you removed the after-birth?’ He replied ‘Oh, yes.’ She remarked, ‘That was the smallest afterbirth I ever saw.’” The doctor adds, “This is the case in a nutshell,” and wants some advice as to what course to pursue. He asks, “Could parts of placenta remain in the uterus for this length of time and the woman live?”

With the limited facts before us we are unable to express a *positive* opinion as to the presence or absence of placental fragments in this case.

We understand that the woman had been confined *six months* previous to your visit—that at that time she had a temperature of 105°F., five to seven chills daily and was so odorous she could be smelled out on the front porch. *Examination revealed a torn uterus.* Here, Doctor, was possibly the seat of the trouble—an infected uterine wound. It is altogether possible, of course, that some portions of the placenta remained *in situ* and decomposed, causing the trouble. On the other hand, the wound itself may have been infected from below and, of course, in

that case you would have temperature, chills, discharge of pus, etc. We doubt very much the presence of masses of placenta six months after delivery.

You do not state whether the menses had returned. You may have had a fibrous endometritis with streptococcic infection of the uterine lesion. This would give you a very unpleasant train of symptoms and a foul discharge.

It seems to us that the best thing for you to do is to state exactly what you *saw*, not expressing any opinion. Physicians should not, after all, club each other on the head, and if the medical attendant in this case was guilty of leaving a laceration of this kind he did enough harm without being blamed for leaving fragments of placenta. Of course if you and your colleagues know it to be a habit of his to leave the uterus in this improper condition you have good grounds for suspicion in this instance, but you cannot *prove* the negligence and it would not be fair, therefore, to saddle him with the offense.

The woman may possibly have had a very small placenta. Investigate conditions during the puerperium, character of the discharge, etc., and find out when the elevation of temperature commenced—when the woman had the first chill. The formation of abscesses in this case is an interesting feature and we very much suspect that a hysterectomy will be necessary. Just where are the abscesses formed? Do we understand them to be in the walls of the uterus (which is unusual) or in Douglas's pouch?

Frankly, we do not think that fragments of the placenta could have lasted six months. Still they might. It is a pity that you did not have the pieces of tissue you removed examined.

Once more, Doctor, no matter how negligent you may believe the physician to be, it is a question whether it is desirable to expose his shortcomings on the witness stand. He should be labored with in private, made to understand that he must change his methods or be disciplined by the profession as represented by his colleagues in the neighborhood? Suits against doctors are too common as it is and if the laity can set one

doctor against the other we must not be surprised at the growing disbelief in medicine and the tendency to question the value of physician's services.

QUERY 5339.—“A Man Who ‘Cures’ Insanity.” M. V. G., Missouri, writes: “There is a doctor in this city advertising that he can ‘cure insanity.’” He referred to the alkaloidal remedies thus: “If the alkaloidal remedies can cure pneumonia and other diseases equally severe in a few days why should it be surprising that insanity can be cured?” Those are not the exact words but the meaning is the same. If you know of any remedies that will “cure insanity” please write me immediately.

The absurdity of the statement made by the advertising physician is apparent. Insanity is a term covering a multitude of conditions, any one or combination of which deranges the mental faculties. A person may be sane to the great majority of people and manifestly insane at the same time in the eyes of the expert. How any one remedy or combination of remedies therefore could “cure insanity” remains an unanswerable problem. It is altogether likely that the gentleman advertising needs treatment himself, for he certainly suffers from “delusions,” and delusional insanity is a very common disorder. Numberless drugs are of use in treating the insane. Pneumonia is a disease-process presenting certain pathological conditions in regular sequence, hence the alkaloidist, studying, as he does, underlying abnormalities and treating pathological conditions instead of disease-names finds it feasible to give the right remedy at the right time and thus control conditions. He does not treat pneumonia but the infection, congestion, systemic toxemia, etc., as may be necessary.

QUERY 5340.—“Neuralgia of Testicles.” W. S., Iowa, has a case diagnosed “neuralgia of the testicles” in a farmer, aged 40. Married, four or five children, youngest two months. Practised onanism for ten or twelve years. Prostate slightly enlarged. Testicles seem swollen and very tender. They are not

hard. Pain nearly all the time. This patient has been treated by half a dozen physicians with apparently no results. The doctor writes: “I have given strychnine arsenate, hyoscyamine, phytolaccin, gelsemin, cicutine, iodides, arsenauro, nuclein, zinc phosphide, sodium salicylate, triple arsenates with nuclein, thyroids, glonoïn, atropine, colchicine, antineuralgic tablets. This constitutes the internal medication during the year. I have also given opium and henbane and rectal suppositories to control pain. I have used applications of different kinds but have had better results by using an iodine liniment. It looks to me as if castration was the only hope left and he is willing to have it done if I give the word. At times I have been able to control the pain for two or three weeks. Then it is the same old thing over. I shall be very thankful for any suggestions that you may make. I have treated a number of cases similar to this and have always had excellent results. The man's nutrition is good, bowels regular, urine normal.”

If the writer had a clearer idea of clinical conditions here he might be able to suggest helpfully. How about the seminal vesicles? Suppose you have both the urine and prostatic fluids examined microscopically and test the reflexes. Find out if this man has ever had specific urethritis. Macrotin, gr. 1-3; anemonin, gr. 1-3; bryonin, gr. 1-6, will probably relieve the pain if pushed to effect. A prostatic suppository might be inserted at night with advantage and guaiacol applied freely locally. Try these measures and let us know results. The sinusoidal current might prove beneficial, as might moist heat. Examine the rectum and dilate sphincter and thoroughly.

QUERY 5341.—“Rhus Aromatica in Enuresis.” F. P. G., Kansas, writes: “On page 115 of his ‘Guide,’ Dr. Shaller recommends rhus aromatica in different doses, depending on age of child. Now, what I want to know is how often does he give this dose in enuresis.”

We suggest that you address Dr. J. M. Shaller, 236 Jackson Building, Denver, Colo.

Personally we have not exhibited rhus aromatica to any great extent. Our treatment for enuresis nocturna is atropine, 1-500 of a grain, strychnine, gr. 1-67, ergotin, gr. 1-6, specific tincture of thuja, three to five minims with a teaspoonful of water morning, noon and night. One-half this dose for a child under five. Ellingwood recommends ten to thirty minims of the fluid extract and five to thirty minims of the Lloyd's specific shumac. He says that benefit is claimed from its use in full doses where there is much urine. If satisfactory results are not obtained from small or medium doses it must be gradually increased to effect. This is "good therapeutics" always.

QUERY 5342.—"Appendical Abscess." H. C. E., Illinois, writes us for a little information regarding a case that was recently operated on for appendical abscess. A robust young man, twenty-four years old, in December was seized with pains in lumbar and inguinal regions of right side. Grew worse and a large pus sac formed over region of appendix. He was operated on and a large amount of pus removed and cavity drained for eight weeks until there was scarcely any pus visible, then the wound was allowed to heal up slowly, but now he is suffering as much pain as ever, with a large hard mass forming for several inches all around the wound in the abdomen, causing pain over abdomen and running down into testicles. Bowels are open. No fever, pulse good, some bloating over abdomen, sometimes urine is red, sometimes clear.

This is a case for the surgeon and the sooner you discover just what you have to deal with the better. It is impossible for us to make a positive diagnosis. Only microscopic examination of a section of tissue from the hard mass would enable us to offer an intelligent opinion. Probably extensive adhesions exist. We should not be at all surprised if you found a mass of pus walled off. Is this man tubercular; any syphilitic taint? What caused the original appendical abscess and what operation was done? With a clearer idea of prior and present clinical conditions we

could, of course, discuss the case more intelligently, but under any circumstances it seems to us that prompt opening up of the original wound and a clear recognition of conditions extant is essential. We shall await further communications with interest.

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QUERY 5343.—"Local Anesthesia, Podophyllotoxin, etc." O. W. H., Illinois, asks the following questions:

1. "What combination of brucine and cocaine is used for producing local anesthesia? Would it not be better in the hands of the dentist than the plain cocaine solution and what strength of each is most satisfactory?"

2. "Does podophyllotoxin replace podophyllin to advantage for general use?"

3. "Will the pigmentation of skin accompanying pregnancy yield to treatment recommended for freckles on page 1293 of October CLINIC?"

4. "Wouldn't phenol and chloral, equal parts, as advised for local neuralgia in a recent CLINIC number impair the integrity of the skin?"

5. "Is sodium carbonate up to one ounce in twenty-four hours, as recommended in rheumatism, perfectly safe? Dosage generally given is far below."

6. "Which is the more thorough and better on fractures and dislocations, Scudder or Stimson?"

7. "Is 'Hare's Practice of Medicine' as good as any work in the field now? Of course the therapeutic feature is of little value in any one of them, that has not taken on the alkaloids—the only therapeutic values; but I need the other features of the work, and until we get an exhaustive work by an alkalometrist we have to use the others to some extent."

To these questions we answer briefly as follows:

1. Brucine is about one-fourth the strength of strychnine, and as we do not know the rate at which it is absorbed it would not be wise to use more than 1-8 grain on an adult patient at one time. If you dissolve 1-8 grain in 60 minims of water you will have about 1-6 percent solution; a grain of cocaine

added would give you nearly a 2-percent solution of cocaine, and this ought to be about right for ordinary purposes. Accidents I believe have not been reported from any solution of cocaine which is not over two percent, so that this should give you safety in the use of this drug. Possibly one-half the amount of brucine would answer, and in this case you could use up to two drams of the solution if desirable. The writer has used one percent of brucine and of cocaine together in the same solution, but has only used a few drops of it. So you see it depends on the quantity of the solution which you want to use and whether you are going to apply it to the mucous surfaces or inject it hypodermatically; if the latter, you certainly ought not to inject more than about 1-16 of a grain of brucine, no matter what the quantity of cocaine you are desirous of employing.

2. The writer has found podophyllotoxin better than podophyllin. Podophyllotoxin does not gripe and its action seems in every way superior to the cruder preparation, besides being more uniform.

3. Yes, but you had better examine the condition of the bowels and the action of the liver and of the kidneys, in all cases of pigmentation occurring during pregnancy. You may find something more serious than pigmentation to treat.

4. We think not. However, our readers will have to answer this.

5. The dose is perfectly safe if given well diluted. You can safely give sodium carbonate enough to decidedly quell the acuteness of the rheumatic symptoms, the soda and the acid of the disease mutually neutralizing each other. Soda at any rate is not a toxic substance, unless in enormous doses.

6. This also our readers will have to answer. Personally we are somewhat partial to Stimson. However, it's a matter of personal liking.

7. We are not very familiar with Hare's "Practice," hence have no right to speak authoritatively of it. But some time ago a very extended inquiry was made at our suggestion among the students in the medical colleges and we found that Anders' "Practice" was favored by a very large majority indeed, one

of the reasons being the number of excellent diagnostic tables it contains. We know Anders is good, plenty good enough for us to recommend. We will not do Hare the injustice of comparing his work, being much less familiar with it. We would very modestly suggest that in the new "Alkaloidal Practice" you may find just what you want.

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QUERY 5344.—"Cystitis." C. C. D., Pennsylvania, asks us to suggest the best method of removing the colon bacillus from the urine of a female with tubercular lungs. No tubercle bacilli in the urine. Patient age 18, single, good family. Cystitis present much of the time.

The condition is due to the invasion of the vesical mucosa by the bacillus coli communis. It is liable to appear after an enteritis. It has been suggested that the bacteria migrate through the short female urethra. There are two types, mild and severe.

The treatment suggested in "Everyday Diseases of Children" is as follows: Cleanse the external genitalia carefully, flush the bowel and irrigate the bladder with four to six ounces of a warm solution of lysol, 1-4 percent; tricresol, or antinosin (1:1000), is quite as effective—the later I prefer early. Repeat the process daily and see that the solution is retained for a few minutes.

Salol and formin should be given in alternation every three hours, grains 5 of the first and 2 to 4 grains of the latter. A saline laxative daily is beneficial, and about an hour after each meal 5 grains of the sulphocarbonates in free dilution should be administered to secure intestinal cleanliness; moreover, the sodium sulphocarbonate eliminated *via* the kidneys exerts a beneficial action, as does also the carbolic acid which is set free. In the worst cases one grain of methylene-blue may be exhibited four times daily for two days and then the salol and formin compound used as above. Hydrastin and arbutin, gr. 1-6 each, should be given three times a day for sometime after normal conditions are restored. The tubercular taint will of course require appropriate treatment also.



PHARYNGEAL paralysis in an alleged case of tonsillitis generally means diphtheria.—Earp, *Cent. States Med. Monitor*.

IN scorbutic purpura the condition of the mouth and history of the patient's diet are tell-tales.—Earp, *Cent. States Med. Monitor*.

QUININE has ruined the hearing of thousands and left an incurable buzzing in many more.—Bardes, *Dietetic and Hygienic Gazette*.

ERGOT.—For many years after its introduction, physicians obstinately denied that ergot possessed any medicinal properties whatsoever.—*Critic and Guide*.

DIABETES.—Nothing is superior to a combination of codeine and antipyrin. Sodium salicylate and aspirin are also very useful.—*Critic and Guide*.

FREE FOOD TO NURSING MOTHERS.—A movement is on foot in Paris to supply free food to any mother who nurses her own child.—*Dietetic & Hygienic Gazette*.

IN THE *St. Louis Clinique*, Dr. Oscar S. Barrett calls attention of the importance of preventing deafness, by early attention to colds and catarrhal affections in children.

TYPHOID FEVER.—For the heart, if it wavers, I use cactin, grain 1-134, every one to two hours, strychnine arsenate and sometimes digitalis.—U. G. Iles, *Therapeutic Record*.

IN case of the fatty and contracting kidney dropsy diminishes after the stage of contraction and at this time uremia is more likely to be present.—Earp, *Cent. States Med. Monitor*.

PELiosis rheumatica resembles several forms of purpura and perhaps hemophilia, but these conditions have an absence of the pruritus and edema.—Earp, *Cent. States Med. Monitor*.

MORPHINE AFTER ANESTHESIA.—Don't forget to give a hypodermic of morphine after a rectal operation before the patient comes out of the anesthesia.—Lynch, *American Journal of Surgery*.

LUMBAR puncture is sometimes the only means to distinguish post-basis meningitis from tuberculous

meningitis; in the latter the diplococcus intracellularis is absent.—Earp, *Cent. States Med. Monitor*.

PHYTOLACCA.—Howes says that he has made the most frequent use of phytolacca in tonsillitis, mastitis and orchitis; and as yet has not been disappointed by its action.—*Journal of Therapeutics and Dietetics*.

CESAREAN SECTION.—When Cesarean section is necessary, it is desirable that it should be determined upon in advance and performed as a primary operation.—Reynolds, *Surgery, Gynecology and Obstetrics*.

CROUP.—*The Ohio State Medical Journal* says that at a meeting of the Hancock County Medical Society Dr. R. J. Reyecraft presented a paper upon croup, which brought out a lively discussion. Calcidin was highly spoken of.

OUR CREATOR'S MISTAKE.—If the Creator had been a Dutchman, or a modern American with German leaning, he could have saved a good deal of trouble by constructing women properly in the first place.—Gillespie, *Lancet-Clinic*.

DESPITE the many advantages of ether over chloroform as a routine anesthetic, chloroform fills some places that ether cannot, and if thoughtfully given many of its dangers can be avoided.—C. E. Montgomery, *American Practitioner & News*.

Atrophic cirrhosis may exist for a long time without detection if there is only a slight interference with the portal circulation and especially when there is compensation. We may find the "Capu Medusa."—Earp, *Cent. States Med. Monitor*.

PHTHISIS.—Today many believe you can cure every case if you get them early enough. Every patient needs, not continuous drug giving, but a vigilant and continuous supervision even to the most insignificant of their habits.—Newth, *Medical Era*.

SOME SCHOLARLY ARTICLES.—Those who appreciate that scholarly periodical *The Medical Fortnightly* will be interested to know that three more of Dr. Eccles interesting letters are to appear, completing the series. We would also call attention to the article by Dr. Ashmead, in the number of July 10, on "The Bacillus of Mind and Its Decrees."

DICTATION.—There seems to be dictation and usurpation abroad in the land, a desire to curtail men's rights and privileges. Truly, can we of the rank and file of the profession say, one to the other, "whither goest thou?"—H. C. Buck, *Medical Era*.

THE MEDICAL EXPERT.—Dr. G. G. Burdick has a suggestive article on the "Medical Expert" in *The Wisconsin Medical Recorder* for April. The same number has a valuable paper by Dr. C. W. Cana, on the "Application of Arsenic in Diseased Conditions."

FLIES.—Too much stress can not be invoked to arouse the people to the dangers of allowing the common fly access to dining rooms, pantries, kitchens and living rooms. It is infinitely more dangerous than the mosquito.—*Dietetic & Hygienic Gazette*.

ECLAMPSIA.—As veratrum has in the past proved a faithful servant, we gave enough to produce prolonged bilious vomiting and stop the convulsions. The next morning delivery was spontaneously effected, without a return of the convulsions.—Gillespie *Lancet Clinic*.

ETHICS.—When any physician's ethical standing is made contingent on his limiting his remedies to the formulas of the National Formulary—to U. S. P. products for that matter—it is high time to call a halt and look for the underlying motives of such dogma.—*American Medicine*.

STRYCHNINE.—We give strychnine not for the *nux vomica*, but for its own individual possibility. Each preparation may have indications of its own. We give quinine because it is quinine, and not because it is a derivative of Peruvian bark. The same is true of many other things that we daily use.—Marrs, *Southern Clinic*.

WINE AS AN ENEMA.—*Le Monde Medical* says Houssav treats summer diarrhea in children with enemas of wine. He uses three enemas of a quart each on the first day at a temperature of 7 to 8 degrees. Two enemas on the second and following days until the stools are normal. The wine referred to is ordinary table claret.

CORRECTION.—Dr. Barker calls attention to two typographical errors in his article on page 988 of July *CLINICAL MEDICINE*. First, in the fourth line from the top read "ingestion" instead of "injection." Again, on page 989, under question No. 6, instead of the "R" there should be an interrogation point (?). Our apologies to Dr. Barker.

HAY FEVER.—Dr. C. J. Pfeuger of Fogelsville, Pa., says that his only favorable results in the treatment of hay-fever have been obtained from Merrell's Normal Tincture of Ambrosia. He is going to try it again this year. We hope that the doctor will report his results, and that others who use this remedy will also let us know what success they have with it.

ANESTHESIA.—In *The American Journal of Obstetrics*, for April, Abbé discusses anesthesia at

the Columbia Hospital for Women. He says that general anesthesia following hypodermatic injections of morphine and hyoscine requires very little of the inhalation anesthetic. In some conditions, especially in obstetrics, the hypodermatic injections take the place of the inhalation anesthetic.

URTICARIA AND ERYTHEMA.—We have ample evidence of the effect of uric acid during elimination in the incidence of urticaria and erythema, also upon the mucous membrane in tonsillitis and bronchial catarrh. Its effect upon the skin frequently proceeds so far as to destroy the cuticular layer, and exfoliation with a weeping surface is not an infrequent sequel.—Robert Bell, *Dietetic & Hygienic Gazette*.

RHEUMATISM.—It would appear that the beneficial effects of the salicylates in rheumatism are not so much the result of any specific therapeutic action upon the disease itself, but rather because of their potency as antiseptics in contact with which saccharomycetes are unable to exist and the fermentation upon which uric acid is dependent for its development within the blood is inhibited.—Robert Bell, *Dietetic and Hygienic Gazette*.

WHAT'S THE USE.—Which is worth more to you, the prolongation of your own life with good health and happiness, or piling up a little more money for your children? If the children are properly brought up they will be well able to take care of themselves and fight their own way through the world. If they are not, the sooner the race becomes extinct by starvation the better. We have known plenty of men who kept on working when they should have taken their rest. They are all dead, however.

LYCOPUS.—French suggests that a trial be made of lycopus, the following points being studied: 1. Its action in diseases of the heart, especially in those cases where the vascular action is tumultuous, the pulse rapid, and the heart weak. 2. In diseases of the respiratory organs, such as incipient phthisis, hemoptysis and irritable cough. Here it is said to dry up the secretions of the respiratory tract without irritating the stomach. It is claimed by some that it does this by contracting the vessels of the pulmonary area.—*Journal of Therapeutics and Dietetics*.

INDIAN DRUGS.—*Practical Medicine* for April contains an article by Bose on the "Indigenous Drugs of India." Among these he mentions the *athapoda vousica*, called *bakasha*. This plant he says is a valuable stimulant expectorant. It stimulates the mucous secretion of the bronchials, being especially beneficial in children who do not expectorate sufficiently. It is also believed to be useful as an internal antiseptic in phthisis. There is a saying that no man suffering from phthisis need despair as long as the *bakasha* plant exists. The dried leaves smoked as cigarettes give relief in asthma. Jackson and Betz used this drug successfully in asthma as well as in chronic bronchitis and other pulmonary infections. It has also been recommended as an astringent tonic for gleet and leucorrhea.